

Saudi Aramco's IPO: The motivational factors involved in the purchase of Saudi Aramco shares

Khadija Mehrez

Lubna Hamid

Ali Medabesh

Ghousia Nesreen

College of Business Administration, Jazan University, Saudi Arabia

Keywords

Financial Behavior, Aramco's IPO, Financial Literacy, Financial Self-efficacy, Patriotism, Environmental Concerns.

Abstract:

This study investigates the main reasons behind the purchase of Aramco shares. It examines whether the following financial variables: financial literacy, financial self-efficacy, financial behavior and financial perceived value influence the attitude towards Saudi Aramco's IPO. Other variables dealing with environmental concerns and patriotism perception were added to this analysis, making it one of the pioneer studies in this field. A primary data collection through a survey questionnaire and structural equation modeling (SPSS-AMOS-26) were followed to study our research hypotheses. Our findings highlight a significant relationship between patriotism level, environmental concerns and attitude towards Saudi Aramco's IPO, which may encourage financial institutions to slot this investors' psychosocial side in their marketing strategy, making environment sustainability a part of their corporate identity. Our study will also open the way for further investigation on the role played by these variables on financial decision making and to what extent a financial organization can use them to enhance its performance and gain investors' attention.

Corresponding author: Khadija Mehrez

Email addresses for the corresponding author: Kmehrez08@gmail.com

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1. Introduction

For the first time on December 11, 2019, Aramco, the Saudi Arabian Oil Company traded 1.5% of its shares on Tadawul (Saudi Arabia's stock exchange) in its initial public offering (IPO) at a price of 32 Saudi Arabian riyals (SAR) valuing ARAMCO at \$1.7 trillion, making it the most valuable company in the world. It is believed to be the largest IPO ever (\$25.6 billion) surpassing China's Alibaba (\$25 billion) (Gross, 2019). Aramco is the country's biggest and world's most profitable company; individual investors have been excitedly waiting for its IPO and rightly so. Stock market investments are increasingly becoming popular and attractive among households across the world; Saudi Arabia is not an exception. Saudi ARAMCO claims to enjoy a nation-wide reputation for reliability. Also, in accordance with the country's Vision 2030 and United Nation's Sustainable Development Goals (SDGs), the company claims to be actively working towards sustainable and profitable growth, which may increase its attractiveness in the stock market. With the revenue generated from the IPO, ARAMCO intends to expand and diversify its businesses and gain global recognition as a leader in the global energy sector, while keeping its carbon footprint in check, leveraging technology and innovation and creating value for all stakeholders.

There are many factors that play a role in an individual's investment decisions. In this study, we will be largely focusing on the effect of Saudi Consumers' (investors') financial literacy, financial self-efficacy, perceived value of Aramco's shares on their financial behavior; and the influence of financial behavior on attitude towards Aramco's IPO (shares). We will also study the potential effects of patriotism and environmental concerns on individuals' attitude towards Aramco's IPO because investor thoughts, emotions and actions are found reasonable to account for in investment decisions (Loewenstein, 2000).

Though previous studies on the impact of financial literacy and financial self-efficacy on financial behavior have shown significant relationship (Herawati *et al*, 2018), it will be interesting to investigate the consumers' (investors') perceived value of Aramco shares on the financial behavior. A sound and informed financial decision, taking into consideration value-for-money, ultimately results in individuals' financial wellbeing. Ecological and pro-environmental behavior is gaining academic attention day by day. Hence, it only makes sense to include individuals' environmental concerns as one of the factors that may have an effect on individuals' attitude towards Aramco IPO. Aramco is Saudi Arabia's (World's largest exporter of oil) largest company and is regarded as a national treasure, so it has a patriotic flavor to it. Therefore, it was eminent to study the influence of patriotic feelings on individuals' attitude towards Aramco's IPO.

2. Literature Review

2.1. Financial Literacy

Financial literacy is defined by International Network on Financial Education (INFE) as "A combination of awareness, knowledge, skill, attitude, and behavior necessary to make sound financial decisions and ultimately achieve individual financial wellbeing". It can also be defined as the individual's ability to seek and evaluate relevant information and make decisions with the knowledge of the financial consequences of that decision (Mason & Wilson, 2000). Looking at these definitions, one can say that financial literacy is not only a measure of financial knowledge, but also a set of required skills as well as use of these skills to act accordingly. High financial literacy is linked to avoiding costly debt and increasing levels of saving and investing. While as, those with lower levels of financial literacy, frequently end up in financial stress (Grable & Rabbani, 2020). In line with this, de Bassa (2013) states that financial literacy causes the changes in financial behaviors that are important for individual's financial well-being. Also, when it comes to financial literacy and stock market participation; Van Rooij *et al*. (2011) show that lack of financial literacy significantly prevents individuals to invest in stock markets. Although financial literacy may be an indicator of financial behaviors or outcomes, it does not necessarily imply that individuals will behave in that particular way. There are other factors as well that come into play when it comes to nature of individual decisions such as behavioral/cognitive biases, self-control problems, family, peer, economic, community and institutional influences (Houston, 2010).

2.2. Financial Self-efficacy

Bandura (1977, 1993), who proposed the concept of self-efficacy, defines it as, "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives." Therefore, financial self-efficacy can be defined as people's belief in their abilities to execute certain behaviors that are necessary to attain a specific financial goal. In other words, financial self-efficacy is the confidence that one exuberates and the subsequent actions one takes while making financial decisions. There is empirical evidence that shows that financial self-efficacy has a positive relation with the financial behavior.

Farrell *et al*. (2016) in their study on Australian women's personal finance behavior state that women with higher financial self-efficacy - that is, with greater self-assuredness in their financial management capacities are more likely to hold investment and savings products. Furthermore, a study conducted by Herawati *et al*. (2018) indicates that financial self-efficacy has a direct effect on financial behavior.

2.3. Consumer Perceived Value

Perceived Value has been defined by Zeithaml (1988) as a "consumer's overall assessment of the utility of a product (or service) based on perceptions of what is received and what is given." Similar to this definition is the one presented by Gale (1994) wherein he suggests that perceived value of a product or a service is its perceived quality with respect to its price. These definitions are based on value-for-money concept. Previously, perceived value was seen as a one-dimensional concept; however, following Sweeney and Soutar's (2001) scale development study, it is seen as a multi-dimensional concept which includes both utilitarian and hedonic components and takes rational, emotional and social factors into consideration. They also state that this multi-dimensional study of perceived value explains customer choices better than a one-dimensional 'value-for-money' concept. Moreover, a study carried out by

Karjaluoto *et al.* (2019) in Finland, concluded that utilitarian value is the main driver of overall satisfaction, whereas hedonic value is a stronger predictor of commitment. Similarly, customer perceived value is also referred to as the sum of expected benefits that a customer is seeking from a particular product or a service (Kumar & Reinartz, 2016).

2.4. Financial Behavior

Xiao (2008) states human behaviors that are relevant to money management are referred to as financial behaviors. Many studies have been conducted in the past that tried to understand the relationship between financial literacy and financial behavior. A study conducted on the financial behavior of South African youth concludes that financial literacy has significant effect on financial management outcomes (Zerihun & Makgoo, 2019). Furthermore, Herawati *et al.* (2018) concluded, in a study conducted among Indonesian students, that financial literacy, financial self-efficacy, and parents' social economic status have direct effect on the students' financial behavior. Financial behavior, in turn, significantly affects individuals' investment decisions (Arianti, 2018). Petersen, Kushwaha and Kumar (2015) also showed that consumer financial decisions concerning saving, use of credit and spending pattern are frequently function of consumers' past experience and interaction with a financial firm along with their long-term priorities.

2.5. Patriotism

Love for one's country is broadly referred to as patriotism; however, love for one's country is not the only component of patriotism. Primoratz (2009) defines patriotism as "love of one's country, identification with it, and special concern for its well-being and that of compatriots."

Several scholars have linked consumer patriotism with customer attitudes. One such study carried out by Kim *et al.* (2013) concluded a positive relationship between consumer patriotism and customer attitudes. In addition to this, another study carried out by Rocha and Fink (2015) also concluded the positive influence of patriotism on customers' intentions and attitudes. Similarly, Wel *et al.* (2018)'s study of the Malaysian consumers also establishes a similar pattern concluding that patriotism shows a significant relationship with consumer's buying intention. Furthermore, there is empirical evidence that suggests individual investors' patriotism leads them to invest in stocks of the companies with 'patriotic flavor' (Benos & Johech, 2013).

2.6. Environmental concerns

As the awareness around global warming is increasing, environmental concerns vis-à-vis customer behaviors and attitudes is gaining more and more academic attention. Environmental concern can be defined as consumers' awareness of the environmental challenges and their willingness to personally contribute to addressing those challenges (Akehurst *et al.*, 2012). Environmental concern can be a motivator of individual's certain actions and behaviors; however, concern doesn't necessarily translate to a sense of duty (Roberts, 1996).

Mainardes *et al.* (2017) in their study with respect to customer attitude towards environmental concerns, in China and Brazil concluded that while Chinese consumers showed concern for the environment and were even 'willing to pay if the environment were at stake'; most Brazilians, although, showed concern for the environment, but they 'prioritized behaviors that usually generate a financial return'. This gap between what consumers think about their growing concerns regarding the environment and what they really do to help environment protection is known as the "green gap" (El Haffar *et al.*, 2020).

3. Methodology and Research hypothesis

This study is based on a model specification by Bergner (2011), where the financial behavior is a function presented as following: $FB = f(\text{knowledge, Psychological factors, perceptions, personal characteristics})$.

The main measurement scales for financial behavior were adapted from many research studies dealing with Financial Literacy and Financial behavior among students and undergraduates. Financial literacy perception was measured by a set of 8 questions covering the following themes: debt, saving and investment, and personal finance. For Financial behavior we adapted our scale from the study done by

Mudzingiri *et al.* (2018), we followed the same procedure through a seven-point Likert Scale response. Financial Self-Efficacy Scale (FSES) was adapted and measured by 6 items developed and validated by Lown (2011). For the Perceived Financial Value (PFV) and as the value perceived was widely presented and studied as a multidimensional construct (functional dimensions (price-quality), social and Emotional dimensions) (sheth *et al.*, 1991; Batra & Ahtola, 1991; Sweeney & Soutar, 2001) and considering the nature and type of our financial product (shares, IPOs), only one dimension will be included in our questionnaire: Price/value for money measured by 4 items. "Traditional patriotism scale " has been assessed and adapted from a national survey conducted in USA for Patriotism and citizen participation (Theiss-Morse *et al.*, 1991) where the questions reflected an affective and symbolic attachment to the country. For environmental concerns, our scale has been adapted from Plotz *et al.* (2014) and Roberts (1995), it includes 3 items reflecting the client's willingness to consider and protect the environment through his/her actions.

3.1. Sample and Survey Instrument

A quantitative research method was followed to thoroughly study our research hypotheses. For that, we conducted a primary data collection through a survey questionnaire with a total convenient sample of 400 respondents located in three different Saudi districts: Gizan, Riyadh and Jeddah. The questionnaire was standardized and distributed among Saudi citizens with two versions - English and Arabic. The questionnaire was divided into three sections: Section A contains personal financial characteristics (FLP,FSE, CFPV) and financial behavior , Section B includes external variable such as patriotism and environmental concerns and Section C represents the demographic characteristics of our sample.

3.2. Hypothesis:

The alternatives hypothesis of our research are as follows:

H1: there is a relationship between Financial Literacy perception covering money saving and investment and Financial Behavior of Saudi citizens

H2: there is a relationship between Financial Self-Efficacy perception and financial behavior of Saudi citizens

H3: there is a relationship between the Customer's Perceived Value for money concerning the issued Aramco's shares and the Financial Behavior of Saudi citizens

H4: there is a relationship between Financial Behavior of Saudi citizens and their attitudes towards the Aramco's IPO

H5: there is a relationship between the Environmental concerns of Saudi citizens and their attitudes towards the Aramco's IPO

H6: there is a relationship between the Patriotism perception of Saudi citizens and their attitudes towards the Aramco's IPO.

3.3. Data Analysis Tools

To test our research model, we used a structural equation modeling (SPSS-AMOS-26). Before starting our EFA, some assumptions concerning the multivariate normality, the multicollinearity, sample size and positive definiteness have been checked. For that, a Mahalanobis test has been realized and about 20 observations beyond the Mahalanobis distance critical value ($MD > 82$, $PMAH_1 < 0.001$) have been removed. The collinearity has been also verified ($VIF < 10$, $Tolerance > 0.01$). We also checked that the variance of each measurable variable is not greater than 10 times more than any other variable's variance. For SEM method, a typical sample size for a study is about 200 observations (for our study, with 38 observed variables and 7 latent variables, the min. sample size is about 131). The final sample contains 380 observations and illustrates the following characteristics: (Table 1)

Table 1: Demographics characteristics

Characteristics	Demographic factors	N	%
Gender	Male	293	77.1
	Female	87	22.9
Age	Less than 26 years old	72	18,9
	26-35	50	13,2
	36-45	88	23,2
	46-55	109	28,7
	More than 55 years old	61	16,1
Education	Four-years or bachelor's degree	58	15,3
	Graduate or master's degree	178	46,8
	Professional degree	144	37,9
Income	less than 5000SAR	28	7,4
	5000 to 10000SAR	81	21,3
	10000 to 20000	182	47,9
	20000 to 30000 SAR	89	23,4

The measurement model was carefully evaluated before the path coefficients interpretation. KMO and Bartlett's test was checked and all indicators show excellent factor loadings with a significant reliability (threshold>0.5, Cronbach's Alpha>0.7) with 7 factors explaining a total variance of a 72.6% (table2)

Table2. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.381	15.106	15.106	4.381	15.106	15.106	3.794	13.084	13.084
2	3.752	12.937	28.043	3.752	12.937	28.043	3.462	11.938	25.022
3	3.371	11.623	39.665	3.371	11.623	39.665	3.171	10.935	35.957
4	2.859	9.857	49.523	2.859	9.857	49.523	3.074	10.601	46.558
5	2.480	8.553	58.075	2.480	8.553	58.075	2.719	9.377	55.935
6	2.230	7.691	65.766	2.230	7.691	65.766	2.528	8.719	64.654
7	1.984	6.840	72.606	1.984	6.840	72.606	2.306	7.952	72.606
8	.763	2.629	75.236						

Concluding the EFA with 29 purified items and checking the complexity of our model with $df=356$, a two-step approach: a CFA measurement model and a structural model were performed to test the reliability and validity of our constructs (Anderson and Gerbing, 1988). The AVE and the Joreskog Rho were above the standard of 0.5 and 0.7(table 3)

Table3: Convergent Validity and Composite Reliability

Constructs	AVE	CR
Financial Behavior	0.662	0.855
Financial literacy	0.825	0.931
Financial Self-Efficacy	0.606	0.820
financial price perception	0.818	0.931
Patriotism	0.813	0.946
Environment	0.645	0.845
Attitude towards IPO's	0.774	0.909

Discriminant validity for each variable is higher than the correlation the variable shares with any other latent variables so DV is well verified (table 4)

Table4: Discriminant validity

Constructs	Financial Behavior	Patriotism	Financial Literacy	Financial Self-efficacy	Environment	Attitude	financial price perception
Financial behavior	0.814						
Patriotism	0.011	0.902					
Financial literacy	0.093	-0.089	0.909				
Financial self-efficacy	0.081	-0.130	0.313	0.779			
Environment	-0.024	-0.032	-0.057	-0.048	0.804		
Attitude	0.015	0.013	-0.068	-0.069	0.02	0.880	
Financial price perception	0.017	-0.072	-0.016	-0.063	0.081	0.013	0.905

The model fit summary has presented also a good measurement model fit index, which allowed us moving to the next step. The study attempted to know the main factors that explain the purchase of Aramco's shares. Many variables have been chosen and relationships established to explain the Saudi behavior towards IPO's launched by the petroleum company Aramco. We used AMOS26 to know which path coefficients are significant and to check our structural model fit. The following table summarizes the main results:

Table 5: Regression Weights and Model Fit

Relationships	estimate	S. E	C.R	P	Label
FB <--- FLP	.107	.044	2.453	.014	
FB <--- FSES	.019	.081	.239	.811	
FB <--- PF price	.012	.044	.264	.791	
ATT <--- ENVV	.147	.066	2.237	.025	
ATT <--- PATRIOT	.089	.042	2.100	.036	
ATT <--- FB	-.100	.046	-2.147	.032	
Model fit	Minimum was achieved Chi-square = 187.220 Degrees of freedom = 191 Probability level = .564				
GFI	0.958				
AGFI	0.945				
NFI	0.971				
CFI	1.000				
RMSEA	0.000				

Assessing the goodness of model fit, all the indices represent a very good score, so there is no significant difference between our model and the saturated model (The perfect model). However, according to the regression weights, it can be clearly inferred that out of six established relationships, only four relationships have been confirmed. We can also conclude that apart of financial behavior, environment, patriotism, and financial literacy have positive but moderate relationships with their respective dependent variable. In other words, environmental concerns and patriotism are positively correlated with the attitude towards Aramco's shares purchase with Beta values significant at 0.05 level ($P < 0.05$). Therefore, Independent variables, environmental concerns and patriotism have a significant influence on the Aramco's IPO. The same positive relationship is also established between financial literacy and financial behavior. This relationship has been confirmed in many previous studies and it is once again confirmed in our study. Only financial behavior shows a negative regression with the attitude towards Aramco's shares purchase. In our context, financial behavior seems to have a negative influence

on Aramco's IPO. It is clear that, the more the respondents have the attention and the will to invest and save the less they tend to react and invest in Aramco's shares. This negative relationship can be explained by the insignificant return on investment offered by this company for the purchase of its shares. The remaining relationships between financial self-efficacy, financial perceived price and financial behavior have shown non-significant relationships at 0.05 levels. The next table gives us a summary of the data analysis through the hypothesis testing:

Table 6. Hypothesis Testing

Hypothesis	Result	Sig
H1: there is a relationship between Financial Literacy perception covering money saving and investment and Financial Behavior of Saudi citizens	Accepted	P value<0.05
H2: there is a relationship between Financial Self-Efficacy perception and financial behavior of Saudi citizens	Rejected	P value>0.05
H3: there is a relationship between the Customer's Perceived Value for money concerning the issued Aramco's shares and the Financial Behavior of Saudi citizens	Rejected	P value>0.05
H4: there is a relationship between Financial Behavior of Saudi citizens and their attitudes towards the Aramco's IPO	Accepted	P value<0.05
H5: there is a relationship between the Environmental concerns of Saudi citizens and their attitudes towards the Aramco's IPO	Accepted	P value<0.05
H6: there is a relationship between the Patriotism perception of Saudi citizens and their attitudes towards the Aramco's IPO	Accepted	P value<0.05

4. Discussion and Conclusion

This research aims to understand the real factors behind the purchase of Aramco's shares. Contrary to our positive expectations regarding the financial variables, the analysis revealed the non-financial variables - environmental concerns and patriotism expression - had the most impact on Aramco shares' acquisition. In fact, considered as the world's largest producer of crude oil and condensate, Saudi Aramco is expanding rapidly. In March 2019, the company entered into a purchase agreement with SABIC, which will allow its chemicals business to operate in more than 50 countries. With an honorable presence on the national and international market and with an active worldwide development, Saudi Aramco is considered as a national pride. The confirmed relationship between patriotism perception and attitude towards Aramco's IPO clearly shows that being a part of this industrial giant is an expression of the respect and admiration citizens have for their country. This result is also aligned with studies from Wel *et al.* (2018), Rocha and Fink (2015) and Kim *et al.* (2013) showing a clear relationship between patriotism and consumer attitudes or preferences. Benos and Johec (2013) had also confirmed a positive relationship between individual investors' patriotism and their willingness to invest in stocks of companies with 'patriotic flavor'.

Furthermore, for Saudi citizens, supporting Saudi Aramco will automatically support its corporate social responsibility projects and environmental initiatives. In fact, Saudi Aramco has already achieved one of the lowest upstream carbon footprints per unit of hydrocarbons produced and continues supporting the Kingdom's efforts in achieving the United Nations Framework Convention on climate change. By mediating its environment protection initiatives, and making sustainability part of its corporate identity, Saudi Aramco has gained the support of Saudi citizens. This can largely explain the positive relationship that has been found between environmental concerns and the purchase of Aramco's shares. This result is also aligned with many previous researches (Zabkar & Hosta, 2012; Fraj & Martinez, 2006; Mainardes *et al.*, 2017) who had revealed the positive relationship between "environmentally conscious consumer behavior" and their willingness to act and to encourage firms that are committed to the environment protection.

The third hypothesis confirmed in our study concerns the relationship between financial literacy perception and financial behavior, which means that the higher the individual's ability to seek and evaluate financial information, then the better the financial behavior. Such behavior can be showed in the greater capability of money management. The financial literacy of the sample is relatively high, which

may be attributed to their educational degree (Graduate or master's degree, professional degree) which is 84.7%. Thus, a large number of respondents do have high level of financial knowledge. This result is aligned with the studies from Grable and Rabbani (2020), De Bassa (2013) and Arifin (2017) but in contrast with the research conducted by Kholilah and Iramani (2013) who revealed no direct effect of financial knowledge on financial management behavior. Financial behavior was also positively related to investors' attitudes towards Aramco's IPO, which means that the more individuals have conducted and searched for saving and investment opportunities, the more they will be engaged in financial decision. This conclusion provides similar results to those conducted by Arianti (2018), Eberhardt *et al.* (2018) and Petersen *et al.* (2015). The remaining two relationships in our study relating financial self-efficacy, consumer's perceived value for money to financial behavior were rejected. These results are in contrast with Farrel *et al.* (2016) and with Herawati *et al.* (2018) revealing that self-efficacy has a direct effect on financial behavior. Also, many studies had already confirmed the significant impact of price perception on consumer behavior and buying intention (Rezaei, 2015; Torben, 2005; Jiang & Rosenbloom, 2005). For financial decision, Robert *et al.* (2018) studying the factors influencing individual investor behavior, had revealed that investors based their stock purchase decisions on classical wealth-maximization criteria among diverse other variables.

5. Limitations and future research

The results of this study clearly showed a significant impact of non-financial variables on the financial attitude of Saudi investors. What is less clear is if the financial behavior can be also determined by these variables and if we can really generalize this result to other financial institutions which can open the path for future research.

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