

# Modeling the decision-making process of financial path transition from entrepreneur's perspective using a fuzzy cognitive mapping

Push-pull factors for financial path transition

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## Abstract

**Purpose** – This study explores how entrepreneurs modify their financial path(s) and go beyond job security to attain greater financial freedom. The present work examines the cash-flow quadrant (CFQ) attributes and demonstrates the importance of the push-pull factors for an individual's quadrant transition in achieving financial freedom.

**Design/methodology/approach** – A hypothetical model and an abductive approach were used through regression models in a population sample of 260 Bahraini entrepreneurs. Fuzzy participatory cognitive mapping was also used to develop a conceptual model of financial path transition's decision making among entrepreneurs and study the impact of certain push-pull factors on the entrepreneurs' decisions.

**Findings** – The triangulated study identifies six categories of variables: financial freedom, workplace condition, independence, salary level, family life-building and retirement savings as key pull-push factors that significantly impact financial path transition's decision. Fuzzy cognitive mapping (FCM) extends our knowledge of the dynamics of CFQ transitions from a push-pull factor perspective. The results indicate no significant differences between the variables listed in the regression model and the fuzzy cognitive map model. Four categories of pull-push factors appeared as the entrepreneurs' top rankings when ordered by complexity, centrality scores and impact weight. These categories were workplace conditions, financial freedom, independence and salary level. The findings widen the scope of knowledge of each quadrant and rationalize how and why such factors impact quadrant decisions among Bahraini entrepreneurs.

**Originality/value** – Many studies discuss the CFQ model and consider its quadrants a specific method for identifying a unique financial path to generate income. A shifting quadrant occurs when individuals want to change their financial path and move beyond job security to achieve more financial freedom. Although this transition is well-established in the literature, the factors accounting for the individual's transition across quadrants have not received enough attention. This study fills this gap and calls for more in-depth investigations of this area to better understand the dynamics of CFQ transitions from a push-pull factor perspective.

**Keywords** Cash-flow quadrant, Push-pull factors, Quadrant transition decision, Entrepreneur's decisions, Financial freedom, Dynamic financial path, Fuzzy cognitive mapping

**Paper type** Research paper

## Introduction

The cash-flow quadrant (CFQ), otherwise known as Kiyosaki's four quadrants (employee, self-employed, big business and investor, ESBI for short), emerged as a concept to explain the movement of money and to illustrate the different ways of generating income. Existing studies define CFQ as the amalgamation of four different financial paths (employees (E); small business owner (S); big business owner (B) and investor (I)) to generate income (Benhamed and Yaseen, 2019; Ludwig, 2021). This model has received particular attention in the studies of individuals' and entrepreneurs' financial paths (Kiyosaki, 2015). Kiyosaki *et al.* (2012) initiated the CFQ model. He stated that everyone requires a roadmap to find the fastest financial track



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that best suits them to achieve financial success (Kiyosaki, 2017). The purpose of CFQ is to reveal the different strategies necessary to move beyond job security into greater financial success through generating income from four selective financial quadrants (Kiyosaki, 2013; Kiyosaki and Lechter, 2012). Kiyosaki (2017) found that individuals' income levels increase when a CFQ change occurs (Kiyosaki and Lechter, 2012; Kiyosaki, 2013, 2015, 2017). When individuals select the right financial path, they make a calculated move from one quadrant to another. This move increases their cash-flow and enhances their financial freedom.

Research on the relationship between CFQ transitions and financial success has examined the issue from a static benchmarking perspective through the utilization of static snapshot indicators of CFQ positions and financial performance (Benzing *et al.*, 2009; Kiyosaki, 2011, 2013, 2017; Kiyosaki and Lechter, 2012). This static approach has provided much insight into the merit of CFQ as a path to financial liberty. However, the transition course and the traced pathway tend to be dynamic and differ from one individual to another. Different individuals with different financial goals are attracted to different quadrants in different ways. Moreover, the shift from one quadrant to another tends to follow a unique life path, requiring a specific set of characteristics (Benhamed and Yaseen, 2019). A variety of personalized and dynamic factors trigger this transition and its related outcomes. These factors can be classified into two categories: push factors and pull factors. Push factors are those aspects that cause the individual to move toward the exit door of the quadrant. On the other hand, the pull-factors are associated with the attractive variables other quadrants offer.

Although the CFQ transition is well-defined in the literature, hardly any study has provided significant breakthroughs on the factors leading to the individual's transition from one quadrant to another (Kiyosaki, *et al.*, 2012; Kiyosaki, 2017; Stojanovski, 2020; Benhamed and Yaseen, 2019). Our research seeks to fill this gap. It assesses the impact of the push-pull-factors on the Individual's CFQ transition from the perspective of Bahraini entrepreneurs who have already experienced a CFQ change. Our study builds on Kiyosaki's (2015) model, which comprises six push-pull factors: financial freedom (FF), workplace condition (WC), independence (ID), salary level (SL), family life-building (FL) and saving for retirement (SR). Our study adds to our current knowledge of this topic. It provides guidelines to entrepreneurs to focus on the most critical transition factors that yield better financial freedom and security. Finally, this study aims to stimulate research in this field as limited studies have been conducted on the Arabian Gulf region.

In the following sections, we present a review the literature on CFQ and push-pull factors that motivate the transition from one quadrant to another. We then present a conceptual model and research hypotheses for testing. Next, we outline the research method and approach used for data collection. Finally, we offer our analysis and results, discuss findings and implications, draw conclusions and suggest future research avenues.

## Literature review

### *CFQ transition: static vs. dynamic approach*

Kiyosaki (2013) defines CFQ as a mechanism with different implementations of various income-generation schemes (see Figure 1) (Andrew, 2018). This mechanism contains four quadrants known as ESBI. The (E) quadrant is for employees working for an organization at any operation level in exchange for a salary. Typically, this employee asks for job security; they are more concerned with their career stability than their financial success or income level (Kiyosaki, 2013, 2015, 2017). By contrast, individuals in quadrant (S) are firmly established in their business. They are considered "Entrepreneurs" (Georgellis *et al.*, 2005) (Lichtenstein, 2010) who are more interested in their independence and the success of their small businesses. Individuals in this group are usually less sensitive to job-security. Individuals who belong to quadrant (B) mainly opt for having a well-established business and get others to work for

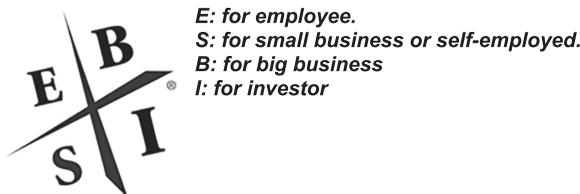
them (Stojanovski, 2020). They reckon leadership is the most needed trait. They assume people from all quadrants surround them, and they will need to deal with them to achieve their financial goals. Within the (I) quadrant, money is converted into wealth as investors make money by having employees work for them. People in this zone achieve a high level of financial freedom thanks to the different investments they make (Ludwig, 2021).

Academicians and practitioners argue that there are different financial paths to generate income. For example, salary may be a conventional way to earn a living for an employee who looks for job security. On the other hand, being self-employed involves creating your own job and initiating your own business through an entrepreneurial pathway (Andrew, 2018). Those belonging to the employee and self-employed quadrants fall under the active income-generation course. Finally, big business owners and investors generate income by making money work for them through business ownership or money investment. This category constitutes passive-income generators (Kiyosaki *et al.*, 2012; Stojanovski, 2020; Ludwig, 2021).

Members of a particular quadrant share financial pathway conditions. They share similar financial and economic conditions and have comparable profiles in attitude, personality, ways of thinking and work behavior (Kiyosaki *et al.*, 2012; Andrew, 2018). Kiyosaki (2015) found that achieving financial freedom and generating extra income are common goals for all members across different quadrants. This feature explains why some members who seek to reach faster financial freedom and higher income levels find changing the financial quadrant an attractive option. However, changing quadrants is not an easy process; CFQs are different in strategy, tactics and work behavior required to generate specific income levels and achieve financial success. Besides, each financial quadrant requires affiliated members to master a specific set of skills, competencies, mindsets and ways of thinking to achieve their financial goals as per each quadrant's features and requirements (Kiyosaki, 2011, 2015; Ludwig, 2021).

*The dynamic approach of the cash-flow quadrant: a guide to the slashing model*

Examining the financial path concept from a dynamic perspective reveals that people can chart various financial paths with different combinations from different quadrants. For example, an individual may decide to start their financial path from quadrant (E) and generate their income only by being an organization's employee. The same person may also decide to generate income as an (S) and start a private practice by setting up their own start-up as an auto-entrepreneur or a freelancer, for example, without leaving their original job (E). This path qualifies this person to be an (E) and (S) simultaneously. Furthermore, this individual might decide to turn their small business into a big one and become a (B) person. In such a case, the person would own the business but does not have to work for it since they would engage staff to work for them (Benhamed and Yaseen, 2019). They are likely to hire a manager to run the business. Besides, the same person could decide to own a business (B) that is not related to their specialization or area of expertise while still working as an employee (E) in another organization. Under such conditions, this individual would be considered a slasher entrepreneur (E/B), making money from the (E) and (B) quadrants together. Finally, an (I)



Source(s): (Kiyosaki, 2014)

Figure 1. Cash-flow quadrants

person may generate income if they invest in a single organization in the stock market or real estate while being an employee and or self-employed at the same time (Andrew, 2018; Stojanovski, 2020; Ludwig, 2021)

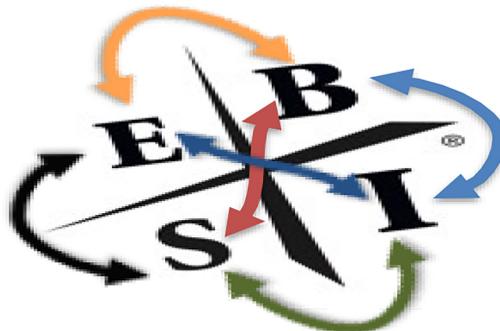
In summary, a person selects a CFQ to initiate a financial path. As a slasher entrepreneur, they can still operate on all four quadrants or a combination of them (Alboher, 2007, 2012; Bohas *et al.*, 2018) (see Figure 2). Alboher (2012) states that slashers build slash financial paths by cultivating multiple skills, talents and income streams. In so doing, they create satisfying professional lives and achieve better financial success.

Adopting the CFQ dynamic approach to classify the different financial paths provides a more effective method to understand the slasher entrepreneur's financial behavior, attitudes and ways of thinking. These slashers can earn money by combining all four quadrants or mixing some of them. In so doing, they maintain the *One Person/Multiple Quadrants* status (quadrants range from E to I) (Benhamed and Yaseen, 2019). Slashers use their skills, talents, knowledge and competencies to pursue diverse financial and personal interests. While some of these interests seek to preserve their financial security, others aim to raise their financial success and freedom. The *slashing model* charts new and different patterns of financial paths that lead to attaining financial goals. These crafted combinations add up to three or four slashes (E/S/B/I) working simultaneously as per the "*One Person/Many Hats*" model. For instance, most small business and start-up owners (S) fall into this category (*One Person/Many Hats*). Also, employees (E) who play more than one role quite often fall under this category (Benhamed and Yaseen, 2019).

The *CFQ Model* has two configurations, classical and dynamic. It breaks down the boundaries between different financial paths, options and patterns of individualized income generation processes. This is achieved when an individual shifts from one quadrant to another according to various tracks and financial maps. However, endogeneity arises concerning the potential factors that may stimulate an individual's quadrant transition. This issue will be examined in the next section, highlighting the most influential factors likely to attract or repel individuals in each quadrant.

#### *Push-pull factors for quadrant's change*

Current CFQ research indicates that people's decision to change quadrant is a function of special forces (personal, organizational, social and economic). These include work experience, work environment, passion, talents, skills, interests, development stage, self-concept, etc. Overall, individuals situated in the same quadrant pursue similar financial paths. They also adopt similar quadrant position development processes (Benhamed and Yaseen, 2019). As a result, they often view social, organizational, economic and personal factors differently from



**Figure. 2.**  
The dynamic approach  
of cash-flow quadrants:  
The slashing model  
toward better financial  
success

other members in the same financial quadrant. It follows that different quadrant members are individually exposed to a particular way of thinking, doing, being, reacting and feeling that is distinct from other members (Andrew, 2018). These differences come from specific individual experiences and events that occur during critical human and career development phases. For instance, people who overcome the job security issue are more likely than others to shift quadrant. Seeking more financial freedom is considered one of the most critical stimulating forces for a decision (Benhamed and Yaseen, 2019; Stojanovski, 2020; Ludwig, 2021).

There is a powerful mechanism to explain quadrant transition. The central argument of this mechanism is all individuals within the same quadrant experience objectively similar socio-economic and organizational contexts and forces. However, individual responses to an interpretation of those forces differ depending on their specific factors and development phases. These differing interpretations of the same elements, events and contexts drive decisional differences in goals, attitudes, behaviors and financial development views (Kiyosaki, 2017; Stojanovski, 2020).

Classifying individuals into two categories helps to explain the transition from one quadrant to another. Some individuals deliberately change their quadrant for a specific reason (Andrew, 2018). Others have no choice but to change their quadrant. This means that people are subject to the so-called push and pull factors. Research has uncovered apparent individual differences in quadrant transition decisions that explain how pull-push factors work to change quadrants. Push factors are those aspects that push the employee toward the exit door of the (E) quadrant (Benhamed and Yaseen, 2019). They are also called “controlled factors” because they are internal and could be controlled by the organization(s). Loquercio (2006) claims that it is unusual for people to quit jobs they are satisfied with since most employees prefer stability.

Nonetheless, under certain circumstances, employees are “pushed” to seek alternative jobs because they are dissatisfied with their current jobs. According to Altinoz *et al.* (2012), employee job satisfaction depends on the extent to which their needs are met. In this connection, Iliasa *et al.* (2018) argue that the degree of satisfaction of intrapersonal psychological needs, the existence of meaningful relationships with work, and the stability and feeling of connection to work consistently impact job satisfaction (Aleksynska, 2018). In addition to job satisfaction, people consider many other reasons before deciding to change quadrants. For instance, a higher salary would be considered a pull reason.

On the other hand, conflicts with managers or colleagues are viewed as a push reason. Likewise, workplace environment and low wages qualify as push factors, while passion and interest in a specific job count as a pull factor. Thus, a mixture of push-pull factors potentially influences the individuals’ decisions to change quadrant. For example, people may change the (E) quadrant because they do not experience the desired level of challenge or are not growing in their current positions (push). By contrast, they feel motivated toward better prospects elsewhere (pull). Hughes (2006) and Kiyosaki (2013) point out that personal background, self-concept and financial freedom positively impact someone’s decision to shift quadrant (Kiyosaki, 2015). Carter (2003) adds that employees find self-employment appealing as soon as they recognize its benefits, such as independence, financial success, self-realization and innovation. Likewise, Hughes (2003), Hoang and Gimeno (2003) and Georgellis *et al.* (2005) revealed that employees favor self-employment because of the independence, financial freedom and a better work environment it affords.

Given that push-pull factors significantly impact people’s decisions to change quadrants, it is essential to consider the most influential factors and think about the best ways to manage them (Benhamed and Yaseen, 2019). It will also be worthwhile to explore other aspects of transitioning into new financial paths to maximize financial success and freedom. This research aims to examine the effects of the following factors: workplace, independence, salary, financial freedom, personal background and saving for retirement on the individuals’ choice to change their financial paths.

**Conceptual model and research hypothesis**

This study assesses the impact of push-pull factors on individuals’ decisions to change the CFQ in the Bahraini context. To this end, a conceptual model is elaborated, which focuses on the impact of six push-pull factors on people’s decision to change the CFQ. This push-pull model stands on the assumption that some individuals may deliberately change their quadrant for one reason. In contrast, others are compelled to change their quadrant. This means that push and pull factors significantly impact people’s decisions to change their CFQ (see Figure 3. Conceptual model).

Based on the model, we formulate the following research hypotheses:

Abbey (2002) and Kiyosaki (2015) believe that individuals mainly opt for an entrepreneurial path because they wish to achieve economic and financial security and freedom (Chen and Elston, 2013). This desire explains why individuals switch quadrants, rethink their income generation strategy and chart a different path to financial security and success (Andrew, 2018; Stojanovski, 2020). In fact, Kiyosaki (2017) claims that one of key reason that could motivate individuals when they think of changing quadrants is financial freedom, the expected passive income will dramatically make them change the quadrant they are in so that to be able to have higher income (Ludwig, 2021).

H1. Financial freedom has a significant effect on changing quadrants.

A precipitous movement in the four-quadrant zone and lack of readiness for change will not occur without the existence of major forces. Individuals’ decision to switch quadrant could be made because of push factors related to the workplace environment (Jensen et al., 2017). Researchers speculate that transitions are driven by contextual factors such as the unpleasant and stressful workplace. The mismatch between the motivational affordances embedded in the workplace and the individuals’ overall financial goals, interests and needs also explains such transitions. Individuals feel dissatisfied and then pushed toward the exit door of their (E) quadrant. Some encounter trouble while implementing the shift, especially when they feel they are losing the security associated with their current jobs’ financial benefits (Stojanovski, 2020).

H2. Workplace has a significant effect on changing quadrants.

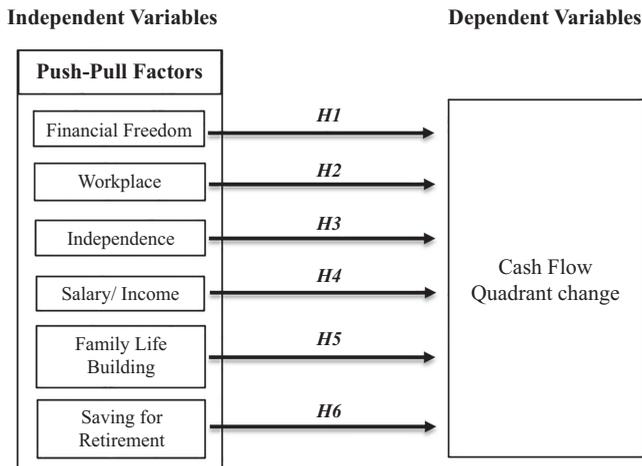


Figure 3.  
Conceptual model

Many studies and theoretical works stress that an entrepreneur's most salient and motivating factor is to become independent (Kiyosaki, 2017; Benhamed and Yaseen, 2019). According to Parasuraman and Simmers (2001), entrepreneurs are often stimulated by their desire to follow their passions and achieve more flexibility in their work. Shava and Chinyamurindi (2019) note that individuals move to self-employment quadrant with the hope of achieving economic benefits and personal recognition. Thus, the financial and individual motivations are the key predictor to a person's subsequent demonstration of entrepreneurial behavior. Scholars argued that it is highly unlikely for a person to demonstrate entrepreneurial behavior and change CFQ without having the desire for independence (Kiyosaki, 2013; Benhamed and Yaseen, 2019; Shava and Chinyamurindi, 2019). In addition, they argued that independence desire as entrepreneurial motivation plays a critical role in identifying who eventually has the willingness to become entrepreneurs and contemplating career change (Shava and Chinyamurindi, 2019). In fact, the majority of entrepreneurs who have changed their quadrant highlight their desire for being independent and making important decisions that have a significant impact on their career and financial path. In the same context, previous studies also concluded that entrepreneurs scored fairly high in the need for independence scores compared to others (Shava and Chinyamurindi, 2019) and they reported that the major reason for establishing new ventures was the strong desire for independence (Riquelme and Al Lanqawi, 2016).

*H3.* Independence has a significant effect on changing quadrants.

Research has identified differences in terms of quadrant transition decisions regarding income generation and financial goals (Shava and Chinyamurindi, 2019). They found that the income generation level is a key driver for an employee to change their financial quadrant despite their high sensitivity to job security. This change emanates from the employee's desire to generate a higher income level, work in a diverse environment, create wealth and achieve more financial success (Kiyosaki, 2013, 2015, 2017, 2015). Additionally, the need to generate more income has been singled out as the main driver toward pursuing entrepreneurial activities (Shava and Chinyamurindi, 2019). Generally, individuals perceive (B), (S) and (I) quadrants as more highly profitable than seeking formal employment (E) and consider that entrepreneurial activities, when practiced strategically, have substantial capacity to improve their financial and economic situation and to generate high revenue (Ludwig, 2021).

*H4.* Income generation has a significant effect on changing quadrants.

Parasuraman and Simmers (2001) contend that entrepreneurs are essentially motivated by the degree of flexibility gained from being self-employed. The relatively greater flexibility in working hours significantly impacts the entrepreneurs' ability to achieve a better work-life balance. According to Kiyosaki *et al.* (2012), Kiyosaki (2013) and Kiyosaki (2015), employees achieve meaningful improvements when they move to another quadrant. They would be in a better position to manage their family commitments and build their family life. Besides, individuals' belief in the importance of flexibility at work is crucial in the CFQ change process. In this context, work flexibility is critical to the idea of demonstrating entrepreneurial intention and pursuing career change as individuals are often faced with work-life balance challenges where more flexibility in handling work is highly required (Stojanovski, 2020).

*H5.* Achieving family life building has a significant effect on changing quadrants.

Kiyosaki (2015) argues that changing the CFQ and moving to an (S) or a (B) quadrant significantly impacts the individuals' retirement plan, contributions and ownership. People display different saving behaviors and decisions depending on the characteristics of the business they own (Karoly and Zissimopoulos, 2004; DeVaney and Chiremba, 2005). For

example, self-employed individuals are less likely to have a retirement plan than employed persons. These persons do not opt for saving accounts as they prefer a quick and easy access to the assets (Kiyosaki, 2017). However they are more likely to save and accumulate assets in numerous different ways—homeownership, retirement plans, business investment, etc (Benhamed and Yaseen, 2019).

*H6.* Saving for retirement has a significant effect on changing quadrant's decision.

### Methodology

This research study focuses on the impact of the push-pull factors on the decision to change CFQ among entrepreneurs. The target population comprises all elements defined before selecting the sample (Malhotra, 2007). The sample pool for this research consisted of Bahraini entrepreneurs who have already changed their CFQs as employees (E), self-employed (S), business owners (B), or investors (I). For this study, Convenience sampling as the most common form of no probabilistic sampling (Edgar and Manz, 2017), was used to get the sample unit and recruit conveniently reachable entrepreneurs located in Bahrain who were available and willing to disclose private data related to their cash-flow decisions and career path. In fact, this technique of data collection has proven to be useful for our study given the difficulties and challenges that we have faced to get access to our list population (Galloway, 2005). Besides, this method was very helpful in speeding up the data collection process and very useful in given us access to critical and important data from entrepreneurs that would not have been possible using probability sampling method, which require more formal access to the list of entrepreneurs (Galloway, 2005).

The data collection process has two phases: survey phase for quantitative analysis and Interview phase for FCM. First, the researchers approached 260 Bahraini entrepreneurs belonging to different CFQ and operating in different industries to complete a self-report questionnaire to collect the first phase data of this study. The used questionnaire was structured into sections. A five-point Likert scale was used to measure the survey. Participants were asked to respond to the questionnaire on a range from 1 = strongly disagree to 5 = strongly agree. Out of 260 surveys distributed to entrepreneurs, 223 valid responses were received, representing a response rate of 85% of the sample. To guarantee clarity, the survey was reviewed and validated by three subject experts and distributed first as a pilot test to 20 respondents before distributing it to the entire sample.

Second, and for triangulation purposes and in order to support the quantitative approach used to explore the entrepreneurs' CFQ behavior, a participatory fuzzy cognitive mapping (FCM) (Kosko, 1986) approach has been used. This approach reflects on the decisions, behaviors and motives of Entrepreneurs toward charting new financial paths (Mehryar *et al.*, 2019). In this context, face-to-face semi-structured individual interviews were used to collect qualitative individual data for FCM. This data collection technique helped creating trust between research and interviewees in order to share their opinions, attitude, perceptions and personal motives toward changing financial quadrant (Rahimi *et al.*, 2018). Individual interviews were conducted with 20 Bahraini entrepreneurs (five from each quadrant) who have already participated in the survey phase of the study.

### *Participants' profile*

A total of 223 Bahraini entrepreneurs accepted to participate in this study and provided valid complete answers (66.7% female; 33.3% male). Most respondents (56%) were aged 25 to 35 which is very aligned with the median age of the Bahraini population (32.5 years [1] (Aaron, 2021)). This age is the typical age for individuals in Bahrain to start building their careers whether as employee, self-employed or business owned as part of a family business.

This sample consisted of 78.2% of bachelor’s degree holders, 8% with master’s degrees, and 1.2% were doctoral degree holders. It is worth noting that the highest percentages of respondents possess a bachelor’s degree, which is usually the educational level required for employment. All participants claimed they started their careers as employees then moved to other quadrants. Of the entire population, 48.3% reported having 1–5 years of work experience, and 32.1% had 6–10 years of experience. For 19.5% of participants, work experience lasted more than ten years. This last result confirms that more than 50% of the respondents have 6 years and above of work experience which is quite enough for an individual to start thinking about new income generation sources. Additionally, almost half of the participants (59.8%) indicated they earn an income level between 500 Bahraini Dinars (BHD) and 1,000 BHD, 25.3% earn up to 2000 BHD, and only 3.4% earn more than 2,000 BHD per month (see Table 1).

In terms of chosen quadrants, the most representative categories of participants were: slasher entrepreneur (E/S), 42.5%, self-employed, 35.6%, business owners, 10.3%, slasher entrepreneur (business owner/investor: B/I), 4.6% and slasher entrepreneur (self-employed/Investor: S/I), 3.4%.

Regarding the participants’ reasons to change CFQ, up to 32.18% claimed they switched their initial CFQ because they wanted to be self-employed. In contrast, 24.15% of the entrepreneurs claimed to shift quadrant to get more financial freedom. Changing the workplace environment was also the main reason to change CFQ for up to 16.09% of the participants. Only 14.94% admitted that they had changed their CFQ to get additional income (see Table 2).

### Measurements

To test the instrument’s reliability and stability, internal consistency using Cronbach’s alpha coefficient was applied to 223 observations. The result was above 0.7 (Tavakol and Dennick, 2011). Table 3 shows scales had a good composite. All variables have Cronbach’s alpha values ranging between 0.758 and 0.959, which indicates their usefulness for analysis.

Participants profile		Percentage
Gender	Male	33.3
	Female	66.7
Age	Below 25	16.2
	25–35	56.3
	36–45	12.6
	36–45 above	14.9
Marital status	Married	40.2
	Single	48.3
	Divorced	11.5
Educational level	Secondary degree	12.6
	Bachelor’s degree	78.2
	Master’s degree	8.0
	Doctoral degree	1.2
Career	Employed	100
	Unemployed	000
Experience	1–5 years	48.3
	6–10 years	32.2
	More than ten years	19.5
Income	Less than BHD 500	11.5
	BD 500-BHD 1000	59.8
	BD1001-BHD2000	25.3
	More than BHD 2000	3.4

**Table 1.**  
Participants profile

**Table 2.**  
Respondent  
characteristics

	Respondent characteristics	Percentage	
Current situation of respondents	Self-employed (S)	35.6	
	Business owner (B)	10.3	
	Investor (I)	2.3	
	Slasher entrepreneur: Employee and self-employed (E/S)	42.5	
	Slasher entrepreneur: Employee and investors (E/I)	1.3	
	Slasher entrepreneur: Self-employed and investor (S/I)	3.4	
	Slasher entrepreneur: Business owners and investors (B/I)	4.6	
	Employee's age when starting their business	Below 25	36.8
		26–35	46.0
		36–45	9.2
Above 45		8.0	
Reason for changing quadrant	Workplace	16.09	
	To be self-employed	32.18	
	To achieve financial freedom	24.15	
	To earn additional income	14.94	
	Others	12.64	

**Table 3.**  
Reliability and  
construct validity

Constructs	Cronbach alpha
Financial freedom (FF)	0.944
Workplace (WP)	0.894
Independence (ID)	0.882
Salary (SA)	0.901
Family life building (FB)	0.758
Saving for retirement (SR)	0.950
Change in cash-flow quadrant (CFQ)	0.959

The reliability coefficient for all components of CFQ is 0.959, and the reliability coefficients of the independent variables in this study concur with the minimum acceptable level of 0.758.

To measure the normality of the collected data, the Skewness and Kurtosis statistical test was used. [Hair et al. \(2017\)](#) stated that data has normal distribution if the Skewness score lies between  $-2$  and  $2$  and the kurtosis score is  $-3$  and  $3$ . [Table 4](#) indicates all scores are within the acceptable ranges. This confirms that all the data in this study are normally distributed, and further statistical analysis can proceed.

### Data analysis and results discussion

Statistical analysis of the data collected on the Push-Pull factors dimensions and their impact on entrepreneur's transition decision are presented below. The hypotheses are tested by SPSS 22.0. The research model is measured according to the analysis guideline ([Hair, et al., 2017](#)).

The collected data were analyzed using multiple and simple linear regression analysis. The multiple linear regressions, as the most common form of predictive analysis, has been used to describe data and to explain the relationship between the dependent variable and the six independent variables. The used multiple regression relies on the assumption that there is a linear relationship between both the dependent and independent variables. It also assumes that there is no major correlation between the independent variables ([Bolkhin, 2021](#)).

		Skewness	Kurtosis
Financial freedom (FF)	FF1	-0.289	-1.222
	FF2	-0.178	-1.240
	FF3	-0.037	-0.939
Workplace (WP)	WP1	-0.253	-0.932
	WP2	0.043	-1.113
	WP3	-0.169	-1.222
	WP4	0.007	-1.165
	WP5	-0.348	-1.084
Independence (ID)	ID1	-0.230	-1.173
	ID2	0.124	-1.116
	ID3	-0.297	-1.001
Salary (SA)	SA1	-0.070	-1.270
	SA2	0.143	-0.973
	SA3	-0.358	-0.914
	SA4	0.114	-1.379
Family life building (FB)	FB1	-0.150	-1.025
	FB2	-0.254	-1.157
	FB3	-0.146	-1.106
Saving for retirement (SR)	SR1	0.015	-1.259
	SR2	-0.051	-0.887
	SR3	0.091	-1.226
	SR4	0.173	-1.176
Change in cash-flow quadrant (CFQ)	CFQ1	-0.227	-1.352
	CFQ2	-0.079	-1.098
	CFQ3	0.106	-1.037
	CFQ4	-0.040	-1.175
	CFQ5	-0.144	-1.345
	CFQ6	-0.020	-1.382

**Table 4.**  
Normality test

With reference to the simple linear regression, this technique was used to assess the relationship between dependent variable and each of the independent variables using a straight line. The Linear regression attempts to draw a line that comes closest to the data by finding the slope and intercept that define the line and minimize regression errors (Bolkhin, 2021).

In the present research, the constructs of financial freedom (FF), workplace (WP), independence (ID), salary (SA), family life building (FB) and saving for retirement (SR) were considered as independent variables and measured through a five-point Likert scale. In contrast, the CFQ change decision was considered as the dependent variable in the analysis.

Table 4.6. shows the results of regression that were used in hypothesis testing. The table provides the *R* and *R*-square values, constituting a measure of the relationship between the independent and dependent variables. The *R*-value indicates a strong positive correlation between the push-pull factors on the one hand and the CFQ change decision on the other. The *R*-Square value represents the coefficient of determination; *R*-square is 0.809, which means that the push-pull factors in this model account for 80.9% of the variance of CFQ change. Moreover, all the relationships between the CFQ change and the push-pull factors constructs were significant ( $p = 0.000 < 0.001$ ). The *F*-test value equals 25.209, which is above 1.97, confirming that the link between CFQ change and the push-pull factors is statistically significant.

Table 4 displays the results of the multiple regression analysis and depicts the influence of the selected push-pull factors (FF, WP, ID, SA, FB and SR) on the decision to change the CFQ. The equation below shows the relationship between these variables:

$$\hat{CFQ} = -0.225 + 0.227 FF + 0.370 WP + 0.368 ID + 0.055 SA - 0.020 FB + 0.065 SR$$

The results of the multiple regressions model showed an overall positive impact of the push-pull factors on the CFQ transition. The regression coefficients demonstrate that the workplace and independence components significantly influence the entrepreneur’s decision to change CFQ with respective values of 0.370 and 0.368 ( $p$ -values = 0.000 < 0.01). The obtained measurements for factors having to do with financial freedom, salary and saving for retirement indicated a positive impact of these variables on the CFQ component (with, respectively beta values of 0.227, 0.055 and 0.065). However, this impact is considered non-significant with  $p$ -values of 0.025, 0.412 and 0.155, which are greater than 0.01. Finally, the family life building component has a value of (beta = -0.020,  $p$ -value = 0.544 > 0.01), which indicates a negative and non-significant impact of the family life building component on CFQ transition. The results of the first model of multiple regressions are tabulated in Table 5, which shows details of the obtained coefficients for each component of the equation.

To support our findings and test the linear correlation between each of the independent variables (FF, WP, ID, SA, FB and SR) on the dependent variable (CFQ) we have also conducted a simple linear regression analysis.

The results (see Table 6) yielded a strong positive linear correlation between each of the push-pull variables (FF, WP, ID, SA, FB and SR) and CFQ variable with ( $r$ ) values ranging between 0.789 and 0.983. The generated coefficients revealed that these correlations are significant with a  $p$ -value = 0.000 (<0.01). Moreover, portion variation in each independent variable with a percentage of variations ranging between 62.3% and 96.6% explains the variation in CFQ. The results showed that these variations are significant with  $p$ -value = 0.000 (<0.01). Finally, all the coefficients of each linear regression were positive and significant. This finding indicates a positive and significant impact of each push-pull component on CFQ (beta varies between 1.003 and 1.204;  $p$ -value = 0.000 < 0.01) and supports the hypotheses formulated (see Table 7).

From the multiple and simple linear regression analysis we can eventually realize that this analysis gave us different results. The relationships that are significant when using simple

**Table 5.**  
Multiple regression  
analysis

Variables	<i>B</i>	Sig. <i>b1</i>
(Constant)	-0.225	0.004
Financial freedom (FF)	0.227	0.025
Workplace (WP)	0.370	0.000
Independence (ID)	0.368	0.000
Salary (SA)	0.055	0.412
Family life building (FB)	-0.020	0.544
Saving for retirement (SR)	0.065	0.155
Change in cash-flow quadrant (CFQ)		

**Table 6.**  
Linear regression  
analysis

Variables	Pearson- <i>r</i>	Sig. <i>t</i> -test for <i>r</i>	Coefficient of determination- <i>R</i> <sup>2</sup>	Sig. <i>F</i> for <i>R</i> <sup>2</sup>
FF ↔ CFQ	0.982	0.000	0.964	0.000
WP ↔ CFQ	0.983	0.000	0.966	0.000
ID ↔ CFQ	0.982	0.000	0.965	0.000
SA ↔ CFQ	0.961	0.000	0.924	0.000
FB ↔ CFQ	0.789	0.000	0.623	0.000
SR ↔ CFQ	0.869	0.000	0.756	0.000

Hypothesis	Variables	Linear regression line- $\hat{y} = b_0 + b_1x$	Sig. <i>b1</i>	Hypothesis decision
H1: Financial freedom has a significant effect on changing quadrants	FF ↔ CFQ	$\hat{CFQ} = -0.056 + 1.003 FF$	0.000	Accepted
H2: Workplace has a significant effect on changing quadrants	WP ↔ CFQ	$\hat{CFQ} = -0.074 + 1.048 WP$	0.000	Accepted
H3: Independence has a significant effect on changing quadrants	ID ↔ CFQ	$\hat{CFQ} = -0.220 + 1.030 ID$	0.000	Accepted
H4: Income generation has a significant effect on changing quadrants	SA ↔ CFQ	$\hat{CFQ} = -0.056 + 1.013 SA$	0.000	Accepted
H5: Achieving family life building has a significant effect on changing quadrants	FB ↔ CFQ	$\hat{CFQ} = -0.108 + 1.010 FB$	0.000	Accepted
H6: Saving for retirement has a significant effect on changing quadrant's decision	SR ↔ CFQ	$\hat{CFQ} = -0.549 + 1.204 SR$	0.000	Accepted

Table 7. Hypothesis testing

linear regression (financial freedom, salary and saving for retirement and family life building) are no longer be when using multiple linear regressions. Realizing why this has occurred will go a long way toward improving our understanding about the level of correlation that exists between the Independent variables. In fact, major correlation between independent variables can frequently lead to simple and multiple linear regression giving different results. Thus, considering both results would be highly recommended in such case (Gotsman, 2019).

Therefore, and based on the above tables, we conclude that the workplace component has the most decisive impact on the decision to change CFQ. In contrast, the family life-building component has the least impact on CFQ. Our study results are in line with Jensen *et al.* (2017), who stated that CFQ transitions might well be due to an unpleasant and stressful workplace. Our results agree with Kiyosaki (2015), who stated that push-pull factors are not equal in their degree of importance and impact on the CFQ.

### Fuzzy cognitive mapping (FCM) analysis for the CFQ transition's decision

For triangulation of results purposes and in order to further explore the CFQ transition mechanism among entrepreneurs, we have used a participatory FCM (Kosko, 1986) approach. This approach reflects the decisions, behaviors and motives of CFQ entrepreneurs (Mehryar *et al.*, 2019). It builds on the aggregation of individual fuzzy logic and cognitive mapping to study the cause-effect relationship between different variables in a style of connection-assortments design (Eden, 1988). Structurally, the FCM design consists of a three-level process that classifies nodes and specifies the model's various variables. It also indicates the fuzz signed directed edges and shows the strength of the cause-effect relationships between these variables (Mehryar *et al.*, 2019). First, individual builds a foundation of their overall discussed context and attempts to explain why the context is as it is and what made it that way. Second, the individual tries to explain the significance of the context by hierarchically and analytically organizing the generated concepts. This exercise aims to shape the nodes and establish the edges. At this level of analysis, individuals usually value some concepts over others, perceive some variables as leading to others, and aggregate some variables with others (Eden, 1988). When multiple causal relations between variables are encoded, the different weights of the connections are recognized, and individual mental models are developed. In the last stage of the FCM process, a range of individual cognitive maps is designed and aggregated into a

standardized, generic and participatory FCM mode. This model is powerful enough to summarize the cause-effect relationship as perceived and described by all participants. The FCM development process considers participants as data collection units. It combines their insights to design a macro-level and standardized view of the entire behavior and decisions processes. The generated participatory FCM constitutes the individual's entire dynamic interaction mechanisms. (see [Figure 4](#). Fuzzy cognitive mapping (FCM) model).

Because of the multi-variable and multi-dimensional nature of the CFQ model, the authors used face-to-face semi-structured individual interviews to collect individual FCM data. This data collection method helped build trust with the chosen interviewees to share their perceptions and personal motives and clarify the interview purpose ([Rahimi et al., 2018](#)). Individual interviews were conducted with 20 Bahraini entrepreneurs.

During the interview process, the interviewees were free to mention any variables related to the topics under investigation: causes, impact, relations, motives, thoughts, beliefs, facts, actions, conditions and feelings. As [Figure 4](#) shows, these variables come in the form of single words or phrases. Furthermore, the participants were asked to specify the degree and indices of influence of each variable on other variables and to identify the causal weights of the recognized relations. A mental modeler system assigned value to these variables per the following scale: “-1 = very low and negative”; “+1 = very high and positive” and “0 = no impact” with a potential variation between -1 and +1. The positive value in the Modeler refers to the positive impact of one variable on another. A negative value indicates the negative impact of the variable on the other. Finally, entrepreneurs were invited to elaborate on the factor(s) that led them to change CFQ.

The “Mental Modeler” system revealed the most relevant variables and causal connections. In total, the system yielded FCMs for 20 individuals from the four targeted CFCs. The researchers proceed to diminish the number of listed variables to simplify the web of the generated FCMs and understand their content and patterns. Initially, the set of the most often revealed variables was created. Then qualitative aggregation was performed by combining the less frequently mentioned variables into one larger category. For example, “not motivated to change”, “fear” and struggling to move on” were combined with other similar sub-variables into a node labeled “worried about changing”. Thus, participants first recognized 116 variables that explain the individuals’ behaviors and decisions toward shifting the CF quadrant. This extensive list of variables was then aggregated and reduced into 27 broader nodes that led to an average of 5 categories of constructs to be considered for further examination on how these categories relate to each other. The generated categories are workplace conditions, financial freedom, saving, family life balance and Independence. The “Mental Modeler” system classified them as “driver”, “receiver” and “ordinary”, based on their centrality scores (See [Table 8](#)).

The generated connection values between any two given categories were then added. All the connections with similar signs which are represented in multiple maps were strengthened, while less common connections were only included in the participatory map.

An examination of the obtained mental models and their related variables and nodes shows that the interviewees frequently cited the pull factors. In contrast, the push factors were often left out. The connections created in the participatory FCMs show causality relations between CFQ transition decisions and the five categories of push-pull factors as perceived by the participants (See [Figures 5 and 6](#)).

After ordering the variables according to their centrality scores, it appeared that eight different nodes contributed to the top 3 rankings of the participants’ most shared and listed variables. The “pulled to change” quadrant had the strongest interactions for the participants. The “worried about changing”, “pushed to change” and “dissatisfaction with the current job” quadrants were also key shared categories with high interactions scores and rankings. The “pulled to change” CFQ was at least twice as high as the “pushed to change”

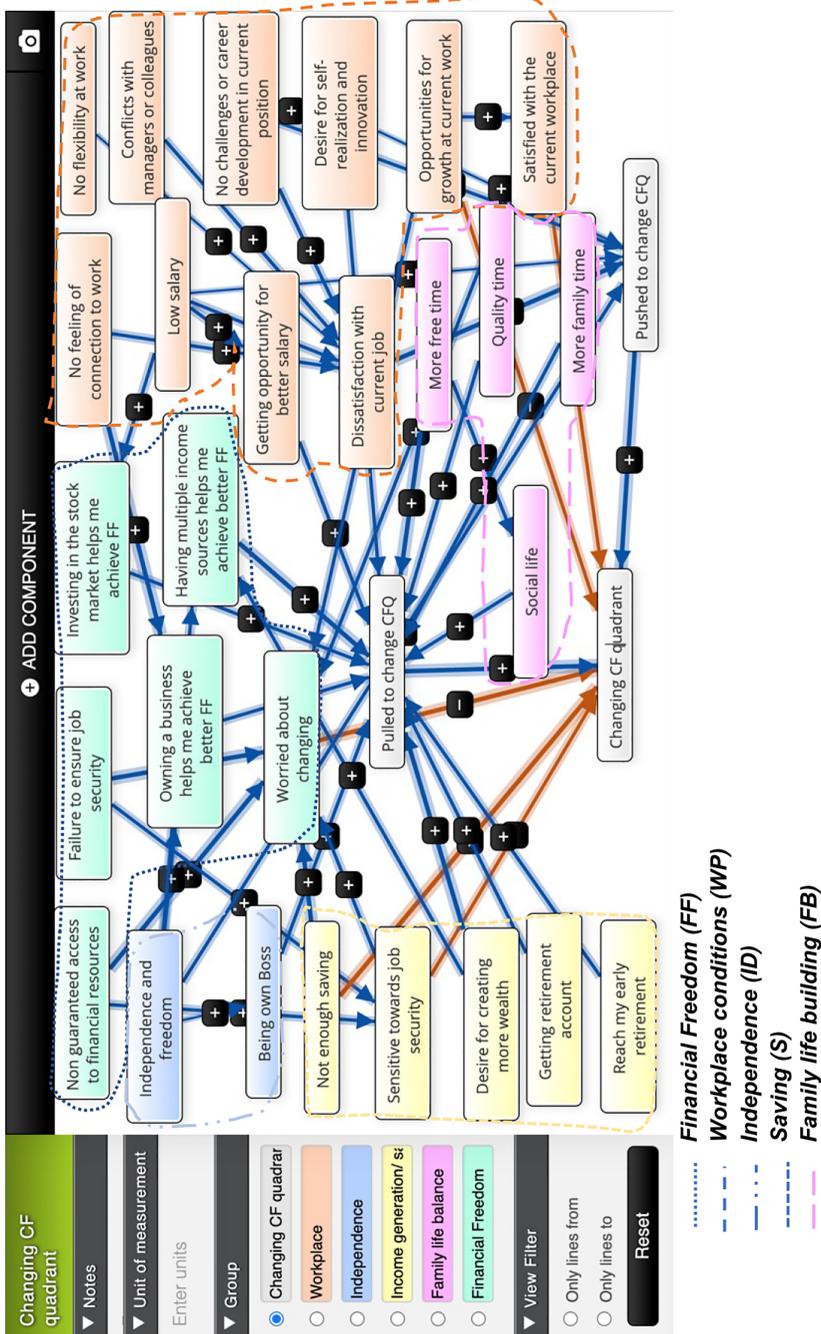


Figure 4. Fuzzy cognitive mapping model

**Table 8.**  
Centrality scores for  
FCM variables

Variables	Centrality score	Type of variable
Pulled to change CFQ	10.78	Ordinary
Worried about changing	5.749	Ordinary
Pushed to change CFQ	4.36	Ordinary
Dissatisfaction with current job	4.35	Ordinary
Independence and freedom	2.82	Driver
Sensitive toward job security	2.8	Ordinary
Having multiple income sources helps me achieve better FF	2.59	Ordinary
Low salary	2.44	Driver
Owning a business helps me achieve better FF	2.4	Ordinary
No challenges or career development in current position	2.34	Driver
Opportunities for growth at current work	2.179	Driver

**Note(s):** The table shows the centrality scores of the FCM variables. Centrality score is the sum of the indegree and outdegree for each variable and is an index of its connectedness to other variables within the map. The categories included represent the top four categories of each stakeholder group

CFQ variable, while “worried about changing” has a slightly higher score than the “pushed to change: CFQ. Besides, there was substantial domination of the pull variables over the push variables within the aggregated FCM, indicating a diversity of pull factors toward changing CFQ among participants (see [Figure 5](#)).

Viewed as an aggregated map, the model yielded 3 clusters of variables as the most central categories in all groups’ models. These variables are the “pulled to change”, “worried about changing” and “pushed to change. Participants’ recognition of these three categories appears to be driven primarily by several direct and indirect linkages to the subset variables “Workplace Conditions”, “Financial Freedom”, “Saving”, “Family life balance” and “Independence”. Among the subset variables, “Workplace Conditions” and “Financial Freedom” are substantially dominant. This step shows a substantial overlap in the variables space between the participatory FCM and the proposed regression model.

These findings indicate participants view CFQ transition decisions as a complex process. These decisions are driven by personal, social and economic interconnections. However, a core set of components is present in most models. These components determine the transition toward the desired financial and economic outcomes. The variability in the connections between these core components and the rest of the categories influences the nature of these outcomes. Understanding the reasons behind these differences will be critical to developing a shared conceptual model that will be acceptable to all participants and serve as a foundation for an integrated entrepreneurial path ([Mehryar et al., 2019](#)).

### Implications

This research provides two kinds of contributions on CFQ and financial freedom. First, a research implication as this study bridges significant research gaps concerning patterns of financial tracks and their resulting financial security. While the CFQ model is generally known for transferring career paths from quadrant to quadrant, the micro-foundation of CFQ presents a one-way interaction between quadrants at the frontiers of CFM. However, few studies systematically and comprehensively analyze career transfer from one quadrant to multiple ones. This paper provides in-depth analysis and combs through the current literature for fragmented notions on one person/multiple quadrants transfers in CFQ. A successful multi-way transfer depends on the individual’s ability to combine quadrants, manage the available financial paths and use the appropriate skills to maintain financial security (see [Figure 7](#)).

Such a multi-directional career transition analysis offers individuals the necessary knowledge and skills to quickly and efficiently achieve their financial goals. Specifically, the



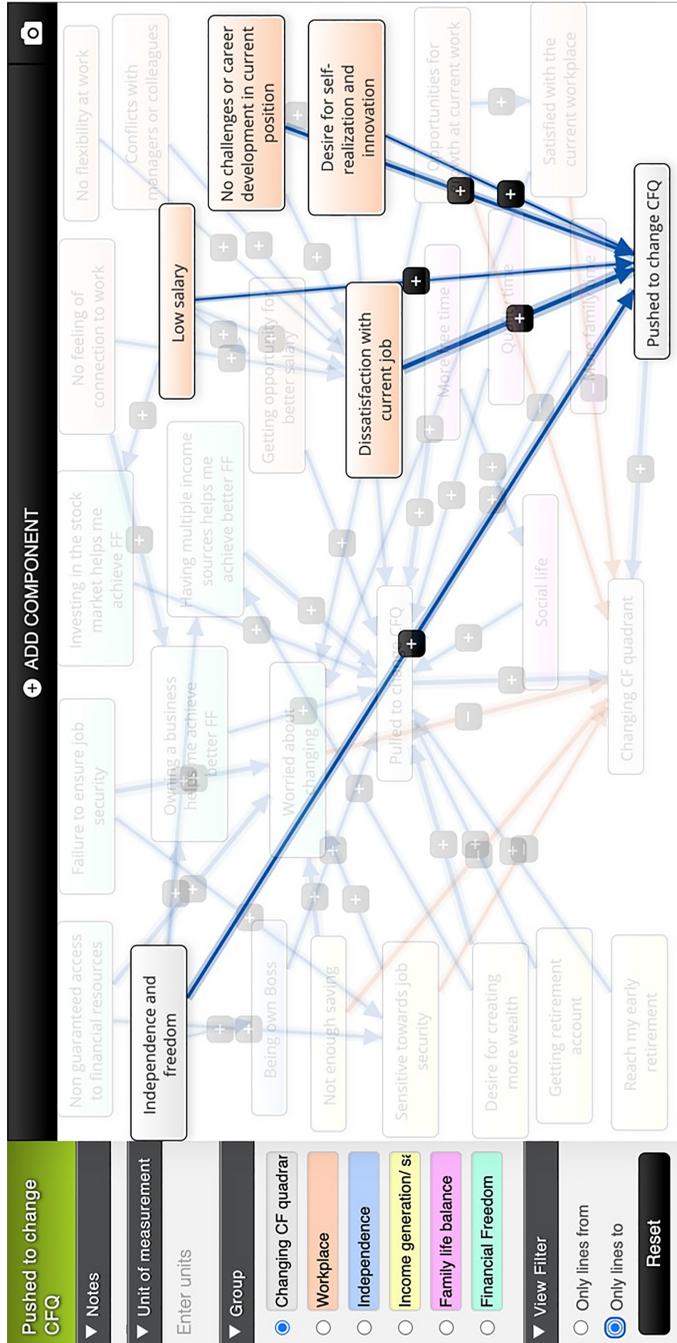
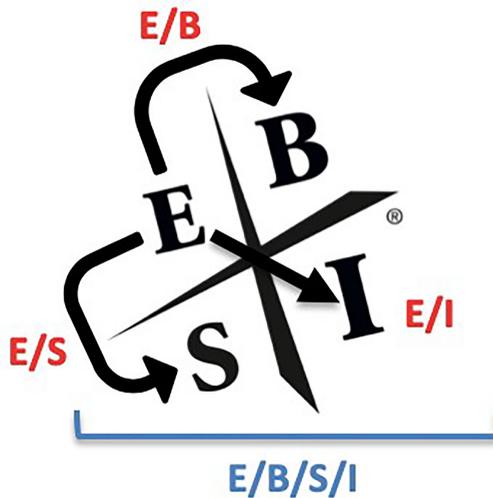


Figure 6.  
FCM of push-factors to  
CFQ change



**Figure 7.** One person/multiple quadrants: the multi-directional career transition path

one person/many hats flow in CFQ is valuable for entrepreneurs who are simultaneously engaged in various financial freedom strategies. It highlights different revenue-generating methods, diversified paths and combinations to achieve financial success before ensuring freedom and job security. However, the skills and the knowledge required for path-diversification and quadrant combinations have not been sufficiently elaborated in the current literature. Our research showed that combinations of financial paths differ from one person to another in terms of skills, knowledge and financial goals. The pattern charted to preserve financial freedom and legacy has not been sufficiently emphasized in the existing literature.

Second, a practical implication since this study expands current research on CFQ attributes. It shows how much the push-pull factors are essential for the CFQ dynamic transition. Although push-pull factors seem to influence individual decisions to shift quadrant, the degree of their influence on the individual's decision to change their financial paths varies considerably depending on diversified personal, organizational, economic and financial settings. (Altinoz *et al.*, 2012; Jensen *et al.*, 2017; Kiyosaki, 2015). Nevertheless, there are relatively limited exhibitions of quadrant transition patterns in simultaneously combing various push-pull factors and their possible link with a particular financial path. The researchers also argued that significant push-pull factors (unpleasant and stressful workplace atmosphere, desire to follow passions and gain flexibility in working hours, low and insufficient salary, personal life building and saving for retirement) impact dynamic CFQ transitions. However, the financial script pattern and push-pull factors stimulation mechanism remain understudied. This study addressed this research gap by analyzing the interaction mechanism of key push-pull factors and investigating their significant impact on the individuals' choice to change financial paths.

### Conclusion

This paper aimed to unveil the dynamics of the CFQ transition. This research demonstrated that the CFQ model enables individuals to chart their financial path(s) and achieve financial freedom. Besides, this study established a comprehensive framework based on qualitative and quantitative data that clarifies the relationship between personal, organizational, economic and financial factors and CFQ transition strategies. Moreover, our research

synthesized the CFQ literature and expanded our knowledge of the dynamics of CFQ transitions from a push-pull factor perspective. Our quantitative analyses and fuzzy cognitive map uncovered a significant influence of most of the listed push-pull factors on CFQ when analyzing financial path transitions. The most influential factors were workplace conditions followed by the desire to achieve financial freedom and independence. This indicates that different types of push-pull factors influence CFQ change activities for each quadrant's member and determine the variation of their chartered patterns.

### Limitations and future scope

Our research analysis is based on a small sample (only 223 observations) in one specific region (Bahrain). To arrive at more strong findings, this analysis should be repeated in other regions (for example GCC region, North Africa or Asian countries, etc.) and with more entrepreneurs operating in different industries. This would also allow for better generalizations of results and findings. Besides, an in-depth examination of the joint moderation effect of some additional social, cultural, contextual factors and personal pull-pull factors lies beyond the scope of this paper. However, we encourage future researchers to take up our initial findings on CFQ transitions and further examine the interplay of behavioral, social, cultural, contextual and personal factors with the entrepreneurs' intention to chart new financial paths.

We also noticed that while the conceptual definitions of constructs and elements to be generalizable and more robust, availability of data and empirical indicators may require different measurements. Some of the measures of push pull factors in Bahrain regions may not be the same in other regions. Besides, at the level of analysis, cross sectional data were used nevertheless better results might be achieved through a longitudinal data that would help disentangle the causal order between push pull factors and CFQ transition decision. Likewise, the research data collection was gathered using a non-probability technique; however, for generalization purposes, probability sampling methods would be more valid and might lead to improved research perspectives. Future research could also include across borders analysis by comparing between different entrepreneurs' financial transition behaviors in different region and assessing the impact of contextualized factors on the entrepreneurs' intention to pursuit new financial paths.

### Note

1. Based on Worldometer elaboration of the latest United Nations data, June 17, 2021. <https://www.worldometers.info/world-population/bahrain-population/>

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