

The Potential Role of Irrationality and Behavioural Nudges in Entrepreneurship Development Policies in India

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ABSTRACT

Entrepreneurship Development Programs have received a lot of socio-political thrust in India especially of late. This is not unexpected for a country that is entering its maturity, in terms of economic stature; where entrepreneurship is one of the primary means of attaining nationwide financial and social growth for all sectors of society. The current article proposes to understand whether India as a nation has reached equilibrium or is still in a state of flux, when it comes to choosing a career between entrepreneurship and job-seeking. The study also looks into the underlying forces and policy implications for sustained progress in Indian Entrepreneurial scenario. The article first looks to validate the claim that there is a need for advocacy of entrepreneurship. Subsequently, it uses the notions of irrationality and behavioural economics to suggest more effective and sustainable policy framework, by explaining entrepreneurship as a process such as the Transtheoretical Model.

Keywords: Behavioural economics, Entrepreneurship, Irrationality, Nudging, Policy implications

JEL Classification: Z13

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INTRODUCTION

As per report published by the Indian Ministry of Skill Development and Entrepreneurship (2015), about 62% population of India belongs to the working age group of 15–59 years. Considering male labour participation of 90% and female labour participation of about 30%, this translates to about 487 million working population. Of this, only 37 million will receive higher education, while the remaining will primarily consist of individuals with inadequate education or skill to get employed. To add to this there will be an incremental requirement of skilled manpower of merely 14 million per year, while the

increase in workforce every year will be about 15 million individuals. Also, the existing workforce itself has a severe lack of employable skills. This has a two-pronged implication on our economy, first, a significant lack of employment opportunities, secondly, a significant lack of employable workforce.

As a result, there is a growing need for developing employable skills among youth, coupled with development of entrepreneurial skills and tendencies. The above is the key trigger for the National Policy of Skill Development and Entrepreneurship, 2015 (Ministry of Skill Development and Entrepreneurship, Government of India). Among the core objectives of

the above-mentioned policy framework is to 'Promote entrepreneurship culture and make it aspirational' and 'Encourage entrepreneurship as a viable career option through advocacy'.

The first part of the current paper tests the validity of the notion that Entrepreneurship is not an aspiration among the youth in India. The focus here is to understand whether India as a nation has reached equilibrium or is still in a state of flux, when it comes to choosing a career between entrepreneurship and job-seeking. It does so by using a quantitative technique; where in the level of satisfaction with respect to life, work and work-life balance, among entrepreneurs is compared to service holders. The claim here is that if entrepreneurs are at par or better off than service holders in the above-mentioned domains, and yet there is resistance in taking up entrepreneurship as a career option among non-entrepreneurs; there is presence of irrationality in their decision process. Such irrationality may be neutralised by making entrepreneurship aspirational.

In the second part, the possible methods that can be adopted by policymakers to make entrepreneurship aspirational, is discussed with reference to lessons from behavioural economics. The expected outcome is to initiate a discussion about the strengths and weaknesses of the various existing policies and methods under them; thereby creating better and more effective policies.

LITERATURE REVIEW

Career success is increasingly being defined by people on their own terms (*Kanchier & Unruh, 1989*). Individuals are starting to derive more meaning from their work and are reluctant to sacrifice personal and family satisfaction for the sake of their careers (*Yankelovich, 1980*). This is indicative of increasing search for work-life balance while making career

choices or even career-changing decisions. In addition to work-life balance, dissatisfaction from authoritarian and impersonal work environment is having a tremendous impact on employee loyalty. Many well-educated adults, especially the ones with high career expectations, insist upon opportunities to express themselves and therefore make meaningful contributions to society (*Berg, 1981*). This is indicative of the role of meaningfulness of work, self-direction at work, as well as stress experienced at work. Personal and professional growth is often considered a key reason for changing careers or reevaluating job options rather than simply a signal of personal instability or indecision (*Kanchier & Unruh, 1987; Miller-Tiedeman, 1987*). A variety of work roles can hedge against obsolescence and may indicate personal drive, flexibility and good generalist skills. Acquiring many different skills is also protection against unemployment (*Kanchier, 1988*). From the above discussion it is evident that in making career choices or altering career option, certain factors play a key role. These include opportunity to balance work and life (work-life balance related variables), work environment (self-direction, stress, meaningfulness at work) among others. In addition to the above factors, general life conditions often dictate terms when it comes to career pick or changes. Stage of life, culture, childhood fantasies, interests, life roles, middle-age (*Caine, 1974; Sarason, 1977*), all have been found to impact career choices. The Theory of Planned Behaviour Model (*Ajzen, 1991*) states attitude towards the behaviour (ATB), perceived behavioural control (PBC) and subjective norms (SN) as the three critical variables determining entrepreneurial intention and behaviour.

HYPOTHESIS STATEMENTS

Based on the theory of perceived utility and revealed preference we make four assumptions, based on which the hypotheses are formulated:

Assumptions

- Perceived utility of a career depends on factors such as ATB, PBC and SN associated with the job/work.
- Perceived utility of a chosen career is greater than the perceived utility of a career foregone. This assumption is based on the concept of revealed preference.
- At equilibrium, average utility derived from all careers are same. In other words, average utility derived from an entrepreneurial career by entrepreneurs is same as average utility derived from a non-entrepreneurial career by non-entrepreneurs. If this was not the case, then there would be a flux or movement from one career choice to the other, having greater utility. This is the best response (BR) assumption.
- Life Satisfaction, Work Satisfaction and Work–life balance are function of perceived utility of chosen career. In other words, as perceived utility of career goes up, life satisfaction, work satisfaction and work–life balance go up. The above is true, if all other factors are kept constant. If all other variables are controlled, we can expect a random error.

(Life Satisfaction, Work Satisfaction, Work–Life Balance) = $f(\text{PUC}) + K + e$;

where, K = constant not dependent on career; e = random error

Based on the above assumptions, the following hypothesis statements are formulated.

H_{1a}: The mean of overall utility derived from Entrepreneurial career is same as Non-entrepreneurial career

H_{1a}: $[\sum_{i=1}^m \sum_{j=1}^n (U_{ij})] / (n * m) = [\sum_{k=1}^o \sum_{j=1}^n (U_{kj})] / (k * n)$

H_{1b}: The mean utility derived from each variable for both entrepreneurs and non-entrepreneurs is positive for each variable

H_{1b1}: $[\sum_{i=1}^m (U_i)] / m \geq 4$

H_{1b2}: $[\sum_{k=1}^n (U_k)] / n \geq 4$

H_{1c}: The mean utility derived in terms of each individual critical variable for entrepreneurial career is same as non-entrepreneurial career

H_{1c}: $[\sum_{i=1}^m (U_i)] / m = [\sum_{k=1}^o (U_k)] / n$

METHODOLOGY

The current research uses data from Global Entrepreneurship Monitor (GEM-2012) India data. GEM data include data from both urban and rural sectors, meeting the age criteria. Random selection from telephonic data and telecalling or random household visits is conducted. It uses either face to face or Telephonic interview.

GEM data have been used to understand the Perceived Utility of the respondent's career, as it provides the appropriate data points and variables to measure the same. Utility has been described through three constructs in GEM, which are Work Satisfaction, Life Satisfaction and Work–Life Balance. Also, the data have been collected pan-India to balance out socio-cultural or other similar impacts on the data. The total data set including Entrepreneurs, Non-Entrepreneurs, those seeking employment, retired professionals, students, homemakers, entrepreneurial intenders comprise 2,676 respondents. First, the individuals who are underemployment and those who are engaged in Entrepreneurship either Nascent (in the process of starting a business), Baby (started but less than 42 months) or Established (more than 42 months) were filtered into the sample. This resulted in 469 non-entrepreneurs, who were currently under employment.

They also are the ones who categorically refused to have any intentions of ever starting a venture. The other group consisted of 422 Entrepreneurs (Nascent, Baby or Established entrepreneurs). These are only those respondents who have answered all the 13 Likert items and belong to any of the following four categories only that is Service Holders, Nascent Entrepreneurs, Baby Entrepreneurs and Established Entrepreneurs.

The demographic profile belonging to various entrepreneurial stages are as follows in Table 1 to 3.

The data collected were based on 13 Likert items, each of which was measured via 5-point scales. The questions were divided into three parts, that is, Life Satisfaction, Work Satisfaction and Work–Life Balance. Under Life Satisfaction questions pertaining to Idealness of life, life conditions, satisfaction, obtaining important things from life, reliving the present life were asked. Under Work Satisfaction questions pertaining to work autonomy, meaningfulness of work, work stress, work satisfaction, income from work was considered. Under Work–life balance considered work–life time distribution, work–life balance and Opportunities at work and home were taken.

At first, the overall mean of utility was compared between the two groups. Subsequently, all the individual 13 parameters were considered and general level of satisfaction with each variable was measured, using one-sample *t*-test, separately for Entrepreneurs and Non-Entrepreneurs to understand the variables for which the satisfaction level is non-positive. Next, the individual variables were compared between entrepreneurs and non-entrepreneurs for any significant difference using independent sample *t*-test. Finally using factor analysis the most important variables were identified, by using data reduction techniques, and any critical variable for which there is significant difference in satisfaction, between entrepreneurs and non-entrepreneurs was identified.

FINDINGS AND ANALYSIS

The overall satisfaction, calculated by the mean of all the thirteen variables, was compared using independent sample *t*-test for entrepreneurs and non-entrepreneurs:

Table 2 indicates that there is significant difference between entrepreneurs and non-entrepreneurs when it comes to overall satisfaction. Not only is a significant difference observed, but the entrepreneurs are also

Table 1: Showing Demographic Profile of the Respondents

Gender	Non-entrepreneurs (service holders)	Nascent entrepreneurs	Baby entrepreneurs	Established entrepreneurs	Total
Male	373	60	74	169	676
Female	96	28	33	58	215
Total	469	88	107	227	891
Age category					
18–24	54	13	18	18	103
25–34	139	31	47	57	274
35–44	144	22	22	84	272
45–54	92	12	13	51	168
55–64	40	10	7	17	74
Total	469	88	107	227	891

Table 2: Showing the Difference in Means of Overall Satisfaction between Entrepreneurs and Non-Entrepreneurs (NE-E)

	<i>t</i> -test for equality of means		
	<i>t</i>	Sig. (2-tailed)	Mean difference
Overall Work–Life Satisfaction	-2.097	0.035	-0.112

Table 3: Showing *t*-Values and Significance of Various Variables to Indicate in Which Areas There Is Dissatisfaction among Entrepreneurs and Non-Entrepreneurs

S. No.	Variable	Non-entrepreneurs (Test value=4) (N=469)		Entrepreneurs (Test value=4) (N=422)	
		Mean (X ₁)	<i>t</i> -value	Mean (X ₂)	<i>t</i> -value
1a.	In most ways my life is close to my ideal.	4.18	4.123**	4.08	1.342
1b.	The conditions of my life are excellent.	3.70	-5.914**	3.73	-4.908**
1c.	I am satisfied with my life.	3.92	-1.699*	3.86	-2.400**
1d.	So far I have obtained the important things I want in life.	3.62	-7.217**	3.76	-4.029**
1e.	If I could live my life again, I would not change anything.	3.51	-8.366**	3.49	-7.080**
2a.	I can decide on my own how I go about doing my work.	4.20	4.220**	4.50	10.762**
2b.	The work I do is meaningful to me.	3.98	-0.387	4.12	2.22*
2c.	At my work, I am not exposed to excessive stress.	3.79	-3.966**	4.08	1.595
2d.	I am satisfied with my current work.	4.03	0.703	4.11	2.426**
2e.	I am satisfied with my current income from work.	3.76	-4.900**	3.95	-0.898
3a.	I am satisfied with the way my time is divided between work and private life.	3.96	-0.875	4.01	0.292
3b.	I am satisfied with my ability to balance the needs of my work with those of my personal or family life.	3.95	-1.064	4.10	2.037*
3c.	I am satisfied with the opportunity to perform well at work & to substantially contribute to home-related responsibilities at the same time.	3.95	-1.147	4.21	4.490**

**Significance at 5% level; *significance at 10% level

found to be more satisfied than the non-entrepreneurs, as far as overall satisfaction is concerned.

Based on the above finding, the following can be claimed.

H1a: The mean of overall utility derived from Entrepreneurial career is same as non-entrepreneurial career is REJECTED

In order to understand the individual variables in which both the groups exhibit a lack of satisfaction, the mean satisfaction for each of the variables were measured and tested in a one-sample *t*-test. Here the

test value of 4 was considered, as it depicts positive satisfaction. Any variable showing a significant negative difference would indicate a lack of satisfaction from the given variable.

The above analysis indicated significant dissatisfaction (0.05%) among non-entrepreneurs for the following variables:

- The conditions of my life are excellent—Life Satisfaction
- So far I have obtained the important things I want in life—Life Satisfaction

- If I could live my life again, I would not change anything—Life Satisfaction
- At my work, I am not exposed to excessive stress—Work Satisfaction
- I am satisfied with my current income from work—Work Satisfaction

Variables from life satisfaction and work satisfaction seem to be the two main areas of dissatisfaction among non-entrepreneurs.

For entrepreneurs' significant dissatisfaction (0.05%) is exhibited in the following areas:

- The conditions of my life are excellent—Life Satisfaction
- So far I have obtained the important things I want in life—Life Satisfaction
- If I could live my life again, I would not change anything—Life Satisfaction
- I am satisfied with my life—Life Satisfaction

Variables from life satisfaction seem to be the main area of dissatisfaction among entrepreneurs.

Thus when it comes to general life factors both the groups' exhibit equal amounts of dissatisfaction, but non-entrepreneurs seem to be more dissatisfied with factors related to work. The difference in satisfaction between entrepreneurs and non-entrepreneurs when it comes to work satisfaction primarily stems from three factors that are self-direction or control at work, stress at work and income. Entrepreneurs demonstrate far more satisfaction from self-direction, which is critical to one's feeling of autonomy or freedom. Evolutionary and motivational psychologists have described humans as having an innate need for autonomy and self-direction. The entrepreneur in this case being the key decision-maker in the organisation, experiences much greater autonomy the service holder,

who is bounded by organisational policies, leadership, communication flow, etc.

The second key attribute of difference is stress at work, which the non-entrepreneur is far more effected by than the entrepreneur. Again stress at work is often caused by a divergent nature of work and personal value system. This often results in dissonance, resulting in the employee losing his vision. This variable is closely related to the first attribute that is lack of autonomy or self-direction. The final attribute of reduced satisfaction at work is related to income, as the employees may feel that there is disparity in income at work. This becomes especially true for service holders as they have multiple points of reference, such as the ones working in their own organisation, or individuals working in other organisation within the same industry. Distinction bias may also play an important role among the non-entrepreneurs in amplifying the dissatisfaction from their income, as it is a rather easily comparable attribute.

Thus the following can be claimed:

H_{1b}: The mean utility derived from each variable for both entrepreneurs and non-entrepreneurs is positive

H_{1b1}: $[\sum_{i=1}^m (U_i)] / m \geq 4$ rejected for non-entrepreneurs

Variable: 1b, 1d, 1e, 2c, 2e

H_{1b2}: $[\sum_{k=1}^n (U_k)] / n \geq 4$ rejected for entrepreneurs

Variable: 1b, 1d, 1c, 1e

This indicates that there is reason for one to reconsider ones career option and look for other options.

The above raises the question that while both the groups do seem to exhibit dissatisfaction in some of the utility-based parameter, is there a significant difference between the satisfaction levels exhibited by them. In order to understand the above, the average utility exhibited by one group was compared with the

Table 4: Comparison of Utility between Entrepreneurs and Non-Entrepreneurs

S. No.	Variable	Non-entrepreneurs (N=469)	Entrepreneurs (N= 422)	Non-entrepreneurs-entrepreneurs		
		Mean (X ₁)	Mean (X ₂)	X ₁ - X ₂	t-value	Sig. of t
1a.	In most ways, my life is close to my ideal.	4.18	4.08	0.101	1.425	0.155
1b.	The conditions of my life are excellent.	3.70	3.73	-0.037	-0.495	0.621
1c.	I am satisfied with my life.	3.92	3.86	0.059	0.768	0.443
1d.	So far I have obtained the important things I want in life.	3.62	3.76	-0.133	-1.666	0.096
1e.	If I could live my life again, I would not change anything.	3.51	3.49	0.021	0.227	0.820
2a.	I can decide on my own how I go about doing my work.	4.20	4.50	-0.300	-4.509	0.000
2b.	The work I do is meaningful to me.	3.98	4.12	-0.138	-1.891	0.059
2c.	At my work, I am not exposed to excessive stress.	3.79	4.08	-0.287	-3.959	0.000
2d.	I am satisfied with my current work.	4.03	4.11	-0.082	-1.250	0.212
2e.	I am satisfied with my current income from work.	3.76	3.95	-0.191	-2.668	0.008
3a.	I am satisfied with the way my time is divided between work and private life.	3.96	4.01	-0.055	-0.814	0.416
3b.	I am satisfied with my ability to balance the needs of my work with those of my personal or family life.	3.95	4.10	-0.151	-2.223	0.026
3c.	I am satisfied with the opportunity to perform well at work and to substantially contribute to home-related responsibilities at the same time.	3.95	4.21	-0.267	-4.006	0.000

other by using independent samples *t*-test and the areas of difference were recorded.

Table 4 demonstrates the difference between the perceived utility of profession, life and work–life balance, for the entrepreneurs as well as the non-entrepreneurs, respectively. From the above analysis, it can be observed that significant difference in perceived utility occurs in the domains of self-direction at work ($-0.3; p= 0.00$), stress at work ($-0.287; p= 0.00$), satisfied with current income ($-0.191; p=0.008$), work–life balance ($-0.151; p= 0.026$) and opportunity to perform at work and life ($-0.267; p= 0.00$). Thus one can estimate that in as many as five utility-based variables, out of a total of 13; entrepreneurs exhibit significantly greater satisfaction or utility.

Thus it can be implied that even though entrepreneurs experience significantly greater satisfaction from their careers, yet those in service tend to prefer a non-entrepreneurial career, by self-declaration. This indicates a certain degree of sub-optimal or irrational choice making on the part of the non-entrepreneurs.

Thus the below claims can be established:

H_{1c}: The mean utility derived in terms of each individual critical variable for entrepreneurial career is same as non-entrepreneurial career

$$H_{1c}: [\sum_{i=1}^m (U_i)] / m = [\sum_{k=1}^n (U_k)] / n \text{ rejected}$$

- Autonomy at work
- Stress levels

- Income
- Work–Life Balance
- Opportunity to perform

However, in order to be certain of the above phenomenon, the current research attempted to understand if the difference between the satisfaction levels among the two groups was occurring for any of the core or critical variables. The difference may be true for variables that do not truly impact the career choice. Factor analysis was performed using principal component technique to reduce the collection of variables to three of the most critical variables.

Table 5 demonstrates that there is significant amount of multi correlation between the variables and hence factor analysis can help reduce the data to a few critical ones. The principal component analysis used to extract factors indicates three factors that account for 69.74%

Table 5: Showing KMO–Bartlett Test Results to Understand Appropriateness of Data Reduction Using Factor Analysis

KMO and Bartlett's test		
Kaiser-Meyer-Olkin measure of sampling adequacy		0.95
Bartlett's test of sphericity	Approx. chi-square	6916.16
	Sig.	0.000

total variance. The rotated factor loading matrix using varimax rotation table is shown in Table 6.

The above analysis indicates *obtaining important things in life (0.841)*, *meaningfulness of work (0.878)* and *stress at work (0.798)* are the three most critical variables with the maximum loadings on the three factors. Thus if there is significant difference among the entrepreneurs and non-entrepreneurs in any of the above critical variables, the claim that potential sources of significant difference occurring only for unimportant variables can be written off. This would also imply that sub-

Table 6: Factor Loading Matrix for 13Variables Pertaining to Utility or Satisfaction Shown towards Variable of Career Decision

Rotated component matrix ^a (69.74% cumulative variance captured by three factors)				
S. No.		Component		
		1	2	3
1.	In most ways, my life is close to my ideal.	0.315	0.660	0.356
2.	The conditions of my life are excellent.	0.269	0.748	0.064
3.	I am satisfied with my life.	0.278	0.775	0.223
4.	So far I have obtained the important things I want in life.	0.245	0.841	0.093
5.	If I could live my life again, I would not change anything.	0.226	0.753	0.132
6.	I can decide on my own how I go about doing my work.	0.508	0.242	0.574
7.	The work I do is meaningful to me.	0.198	0.141	0.878
8.	At my work, I am not exposed to excessive stress.	0.798	0.182	-0.050
9.	I am satisfied with my current work.	0.693	0.350	0.305
10.	I am satisfied with my current income from work.	0.660	0.361	0.269
11.	I am satisfied with the way my time is divided between work and private life.	0.684	0.342	0.334
12.	I am satisfied with my ability to balance the needs of my work with those of my personal or family life.	0.686	0.334	0.367
13.	I am satisfied with the opportunity to perform well at work and to substantially contribute to home-related responsibilities at the same time.	0.705	0.286	0.395

Table 7: Independent Sample *t*-Test Comparing the Mean Satisfaction/Perceived Utility Levels of Entrepreneurs and Non-Entrepreneurs for Critical Variables

S. No.	Variable	Non-entrepreneurs (N= 469)	Entrepreneurs (N= 422)	Non-entrepreneurs–entrepreneurs		
		Mean (X ₁)	Mean (X ₂)	X ₁ - X ₂	<i>t</i> -value	Sig. of <i>t</i>
1d.	So far I have obtained the important things I want in life.	3.62	3.76	-0.133	-1.666	0.096
2b.	The work I do is meaningful to me.	3.98	4.12	-0.138	-1.891	0.059
2c.	At my work, I am not exposed to excessive stress.	3.79	4.08	-0.287	-3.959	0.000

optimal choice or irrational choice is being made by non-entrepreneurs.

From Table 7, it is found that for the critical variable *stress at work*, entrepreneurs rate their level of satisfaction or perceived utility significantly higher than non-entrepreneurs ($t=-3.959, p=0.00$). Hence, the following can be claimed:

H_{1c}: The mean utility derived in terms of each individual critical variable for entrepreneurial career is same as non-entrepreneurial career

H_{1c}: $[\sum_{i=1}^m (U_i)]/m = [\sum_{k=1}^n (U_k)]/n$ rejected (Stress at work)

The above analyses establish that there is a significant amount of dissatisfaction among both entrepreneurs as well as non-entrepreneurs. However, while non-entrepreneurs exhibit dissatisfaction in the fields of general life factors as well as work-related factors, entrepreneurs only seem to be dissatisfied in the domain of general life factors. This indicates that there are reasons for non-entrepreneurs to consider other career options.

Subsequently, it is observed that entrepreneurs show significantly more satisfaction or perceived utility for a majority of the factors as compared to non-entrepreneurs. It is especially more so for work-related variables as well as work–life balance variables. Therefore, it can be established that entrepreneurs are significantly more satisfied and receive more perceived

utility than non-entrepreneurs in the domains of work–life balance as well as work satisfaction.

The entrepreneurs also exhibit greater satisfaction in the critical variable of stress at work. They experience far less stress at work than non-entrepreneurs. This is a major finding, indicating greater perceived utility in a critical area. Hence, sub-optimal decision making or irrational decision may be observed on the part of the non-entrepreneurs.

DISCUSSION

In order to better understand the policy implications of the above finding as well as to evaluate the existing policy, it is important that entrepreneurship or entrepreneurial behaviour is understood as a process, rather than an event. Entrepreneurship is a series of stages that a person goes through. It could be compared closely to the Transtheoretical Model (TTM). The TTM (*Prochaska & DiClemente, 1982*) was primarily proposed in the field of clinical and health psychology in order to understand how ready an individual is to take up a new behaviour. The TTM refers to a series of stages from pre-contemplation to contemplation to preparation to action to maintenance, as sequence of steps in adopting new behaviour. Its application in other fields (*Grant & Franklin, 2007*) has led to it being used in the field of entrepreneurial behaviour (*Klonek et al., 2015*). Its application in the field of entrepreneurial behaviour is evident from its

comparison to Theory of Planned Behaviour proposed by Ajzen in 1991 (Klonek et al., 2015) where the various steps of TPB are compared and similarities observed. The TTM unlike TPB, goes beyond venture creation and talks about venture maintenance; since without it, the behaviour may revert back to earlier non-entrepreneurial stages.

Its key strength lies in idea of decisional balance (Janis & Mann, 1977) which evaluates the cardinal concept of the pros and cons of adopting the new behaviour (Prochaska & Velicer, 1997). It posits that as a person moves from the earlier to the latter stages the pros increase (by twice) and cons decrease (to half) (Prochaska et al., 2008). This is a big development over the TPB model as it not only lays down the sequence leading up to the process of becoming an entrepreneur but also gives the idea of cardinal measurement of a certain parameter, decisional balance in this case. Other key components of TTM are self-efficacy (Bandura, 1977) and habit strength which may be considered as background variables facilitating the movement through stages. All of the constructs taken from TTM have been found to successfully support the Figure 1 prediction of entrepreneurial behaviour

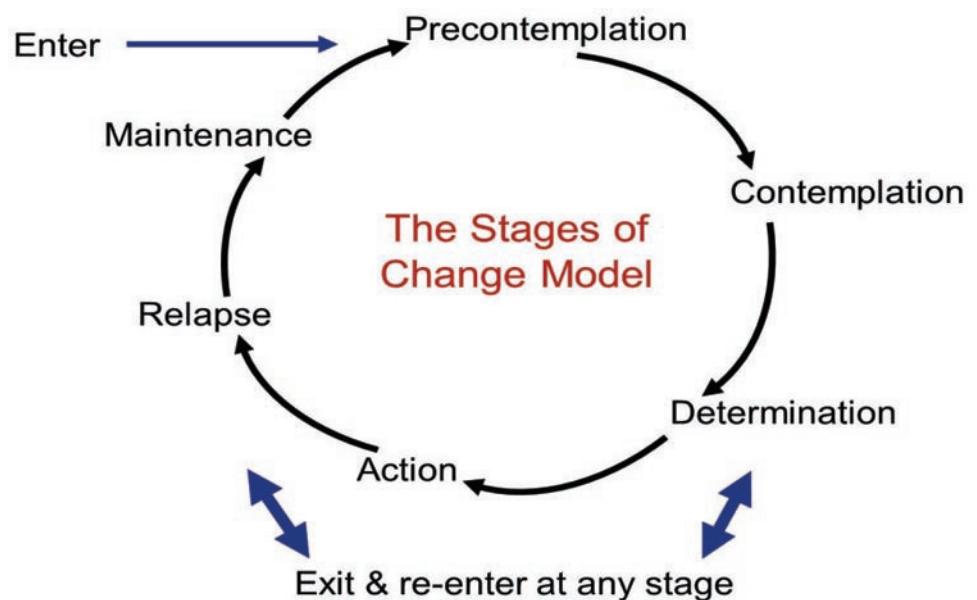
including the cardinal change in decisional balance (Klonek et al., 2015).

Based on the above discussion, it may be claimed that entrepreneurial skill training and development should be treated as in terms of a journey mapping process, clearly divided into phases. Converting non-entrepreneurs into those engaged in start-ups, may be divided into three phases, that is, from Pre-Contemplation to Contemplation; from Contemplation to Determination and from Determination to Action phase. The various nudges necessary to convert individuals from the earlier to the next higher stage may be enumerated as follows.

Transition from Pre-Contemplation to Contemplation

In the Indian context, especially in certain regions of the country, the default choice of most students, with sound financial conditions is to pursue a career in Medical Sciences, Engineering or other professional education such as an MBA, with the primary objective being to get an adequate job. This however is not true for certain geographic segments in India such as Gujarat and parts of Rajasthan. One of the key reasons is the

Figure 1: Showing Transtheoretical Stages of Change
 Source: Prochaska and DiClemente (1982)



default choice. Since most households of Gujarat tend to have their own family businesses, children especially males born in the family are automatically assumed to be taking up the business.

This is aided by continuous information gathered in family gatherings, primarily accumulated from the reliable resources of family members and friends. Individuals in these families also receive significant peer pressure to continue the family businesses or go for other start-up options. All of the above forces are reversed in the service-oriented households, where peer pressure is towards attaining jobs and hence the default choice is looking for employment.

One of the greatest issues with Individuals in the Pre-contemplation stage of Entrepreneurship is that they are not aware of what is needed to be done, in order to establish a venture. This is justified by their perception that the environment is not suitable for starting a new venture. In the first stage, when individuals do not consider entrepreneurship as a career scope, the objective is to simply get entrepreneurial career in their evoked set. They may not be considering Entrepreneurship as a career because of their perception of other career paths being more positive. Thus, inertia towards attaining a job is also one of the foremost causes of them not considering Entrepreneurship as a career option.

Thus lack of information regarding entrepreneurship and inertia towards employment, form the greatest hurdle at this stage.

For the individuals at Pre-contemplation stage, a nudge discouraging competing action, that is, looking for jobs as career options is likely to be more effective than merely encouraging them to start a venture, which may be perceptually blocked.

Thus the promising Nudges at this stage can be related to Default Effect and Status Quo or Inertia Effect.

Default effect and automatic enrolment

Default options are pre-set courses of action that take effect if nothing is specified by the decision-maker (Thaler and Sunstein, 2008), and setting defaults is an effective tool in choice architecture when there is inertia or uncertainty in decision making (Samson, 2014). When it comes to deciding one's career, the choice itself is extremely critical, with its impact lasting a lifetime. Yet it is extremely difficult to gauge the exact outcome of the choice with any amount of certainty. As a result, people more often than not take up the default option available to them.

While changing the default for pre-contemplators, from Jobs to Start-up may appear to be a promising option, it may be extremely difficult to execute. The idea of employment is a deeply ingrained cultural notion. Similarly, the emotion of fear associated with Entrepreneurship and its insecurities among non-business household is very high. Thus altering the default option is next to impossible.

However, automatic enrolment in courses, which increases the awareness towards Entrepreneurship as well as motivation levels regarding entrepreneurship, may be a reasonable alternative.

Reducing status quo effect or inertia

Status quo bias is evident when people prefer things to stay the same by doing nothing or by sticking with a decision made previously (Samuelson & Zeckhauser, 1988). This may happen even when only small transition costs are involved and the importance of the decision is great. Similarly, in behavioural economics, inertia is the endurance of a stable state associated with inaction and the concept of status quo bias (Madrian & Shea, 2001). This is completely comparable with the situation at hand. The current scenario requires individuals to consider Entrepreneurship as a possible career option. However,

individuals tend to not make an active transition in their approach to thinking about careers.

Samuelson and Zeckhauser (1988) note that status quo bias is consistent with loss aversion, and that it could be psychologically explained by previously made commitments cost thinking, cognitive dissonance, a need to feel in control and regret avoidance. Individuals already committed to the idea of jobs and education designed for jobs, would experience great sunk cost due to time, money and effort spent on education. Changes in career choices after investing a great deal in education, therefore creates a resistance to switching. Regret avoidance is based on Kahneman and Tversky's observation that people feel greater regret for negative outcomes that result from new actions taken than for negative outcomes that are the consequence of inaction (*Kahneman & Tversky, 1982*). This further causes people to avoid choosing or altering the status quo.

The segment likely to take up entrepreneurship as a career, tend to be more akin to establishing their own identity (*Banerjee and Jain, 2019*). Also, they are more inclined towards financial benefits and are more calculative when it comes to financial risk taking. These can be a key trigger or focus points of the Entrepreneurial Training. Also, in order to discourage competing behaviour, the legal concerns related to jobs and possibilities of personal conflict can be highlighted. These strategies put together can significantly help reduce the Status Quo effect or Inertia towards employment.

Transition from Contemplation to Determination or Preparation

The individuals in the contemplation stage may be of two types: those who are underemployment and those who are not under any kind of employment. The one's underemployment may not give sufficient attention to the decision, while the unemployed ones may only give sporadic thought to the idea of starting up. The

objective here is to make them more mindful of the situation. Individuals at this stage may receive information that may impact their decision from various sources, which may be broadly categorised into two sources: Formal and Informal. Formal sources are useful for reducing choice overload or Cognitive Load thereby reducing risk complexity. Informal sources such as friend leaving the job and successfully starting-up, can have a greater impact on behaviour. This also reduces risk extremity. However, sharing of negative information such as start-up failure, from informal sources, may have a severe detrimental effect on the start-up decision of the individuals.

One of the common issues with individuals at this stage could be, while they are aware of what is needed to be done; they may fail at activating desired behaviour. This requires the initiation of action bias. The decision situation needs to be simplified. While the decision-makers have intention to transition into Preparation stage, as they may delay the decision due to inability to decide on which start-up option to support. Under such circumstances, the cognitive load needs to be reduced. Once again, here Inertia causes people to inaction. Thus the Inertia of inaction needs to be broken. Also, in the current stage, there is significant need to encourage the target action, over discouraging the competing action. Pre-approved loans with a set deadline may cause action bias.

Choice overload

At the initial level, the Entrepreneurial Intenders need to stop procrastination and move forward with their decision. One of the key reasons for decision procrastination is Choice overload. Choice Overload is also referred to as 'over-choice'. It is the phenomenon caused as a result of too many choices being available to consumers. Choice overload may refer to either choice attributes or alternatives. The application of heuristics in decision making becomes more likely with

a greater number or complexity of choices. Over-choice has been associated with unhappiness (Schwartz, 2004), decision fatigue, going with the default option, as well as choice deferral—avoiding making a decision altogether, such as not buying a product (Iyengar & Lepper, 2000). Choice overload can be counteracted by simplifying choice attributes or the number of available options (Johnson et al., 2012). Therefore, the most relevant nudge at this stage would be to reduce over-choice, by using the techniques of Cutting the number of options, Categorising the choices, Concretising the choices and Conditioning it for complexity. This is likely to reduce Risk Complexity and hence risk uncertainty. Reducing or cutting the options, simply indicates providing the Entrepreneurial Intender fewer options to choose from. Categorisation and Conditioning for complexity require grouping of options in similar types and offering groups with fewer options initially and groups with more options later. For example, while the Intender is evaluating his options, he may be asked to select between services sector and goods sector, initially. If he selects the services sector, he may be asked to pick the industry to which he would like to cater such as hospitality, or health or food, etc. This would help him choose better and easier, because he does not have to compare all options with all options, thereby reducing the cognitive load on him. Concretisation here would include giving him concrete cases of Entrepreneurs who have gone on to establish successful firms.

Hyperbolic discounting

Time or Hyperbolic discounting research investigates differences in the relative valuation placed on rewards (usually money or goods) at different points in time, by comparing its valuation at an earlier date with one for a later date (Frederick et al., 2002). It shows that present rewards are weighted more heavily than future ones. Once rewards are very distant in time, they cease to be valuable. Delay discounting can be explained by

impulsivity and a tendency for immediate gratification, and it is particularly evident for addictions such as nicotine (Bickel et al., 1999). Hyperbolic discounting theory suggests that discounting is not time-consistent; it is neither linear nor occurs at a constant rate. In hyperbolic discounting, values placed on rewards decrease very rapidly for small delay periods and then fall more slowly for longer delays (Laibson, 1997).

Thus simply put, Hyperbolic Discounting is the phenomenon where individuals value benefits that are reaped now more than benefits reaped in the future. Consequently, costs that are paid in the future are not felt as deeply as costs that are paid now. In case of individuals who are already in job with an Intention to start up, there is instant pain of parting with the monthly salary, while the reward of generating profits from the venture is temporally further away. Thus the cost is imminent while the reward is distant. This significantly increases the cost while reducing the perceived value of the benefit. Similarly, for individuals currently not employed, although they do not have to make an imminent payment in terms of their salary, there is still an imminent threat in terms of having to shed certain capital in form of the likes of margin money while the returns or expected rewards will be in the future. Past research shows that one of the most effective ways to offsetting hyperbolic discounting is through entering a pre-commitment contract with oneself, monitored by a close aide. Pre-Commitments are often used as a tool to counteract people's lack of willpower and to achieve behaviour change, such as in the areas of dieting or saving—the greater the cost of breaking a commitment, the more effective it is (Dolan et al., 2010). From the perspective of social psychology, individuals are motivated to maintain a consistent and positive self-image (Cialdini, 2008), and they are likely to keep commitments to avoid reputational damage or cognitive (Festinger, 1957). The behaviour change technique of 'goal setting' is

related to making commitments (*Strecher et al., 1995*), while reciprocity involves an implicit commitment. In this particular situation, hyperbolic discounting leading to delay in starting up may be counterbalanced by getting the person to commit the same along with clearly defined deadlines in a forum that includes individuals that are considered to be socially important to the decision-maker. This commitment also triggers, Action Bias. Sometimes people have an impulse to act in order to gain a sense of control over a situation and eliminate a problem. This has been termed the Action bias (*Patt & Zeckhauser, 2000*). For example, a person may opt for a medical treatment rather than a no-treatment alternative, even though clinical trials have not supported the treatment's effectiveness.

Action bias is particularly likely to occur if we do something for others or others us to act, as illustrated by the tendency for soccer goalkeepers to jump to left or right on penalty kicks, even though statistically they would be better off if they just stayed in the middle of the goal (*Bar-Eli et al., 2007*). Thus if commitments are made, and it is followed by some sort of reminders, it may result in action rather than inaction, causing the person to disregard hyperbolic discounting. This could especially work with entrepreneurs since they give their identity greater importance.

Transition from Preparation to Action

At this stage, the decision-maker has already initiated the process of setting up the venture. Therefore the initial decision has been made and the default state is that of starting up the venture. Therefore the key focus here is to prevent him from opting out because of reasons such as initial hurdles or other more promising options. The information at this stage that one collects pertaining to business primarily tends to be from his business colleagues or friends with similar ventures.

Therefore the majority of the information collected at this stage has informal routes. Since he is committed to the idea of starting up, he is also more susceptible to information that confirms his existing beliefs. Thus at this stage, he is susceptible to confirmation bias (*Nickerson, 1998*). Since the desired behaviour has already been activated, the key focus here is to discourage any kind of competing behaviour. Thus the key nudges that can be considered at this stage are to increase the notion of sunk cost and status quo effect, provide cue to aid the confirmation bias such as social proofs and anchoring effects.

Status quo bias

Status quo bias is evident when people prefer things to stay the same by doing nothing or by sticking with a decision made previously (*Samuelson & Zeckhauser, 1988*). This may happen even when only small transition costs are involved and the importance of the decision is great. This exactly matches with the stage of the Entrepreneur at the preparation stage. Samuelson and Zeckhauser state that status quo bias is consistent with phenomenon such as loss aversion, cost thinking, cognitive dissonance and regret avoidance. The latter is based on Kahneman and Tversky's observation that people feel greater regret for negative outcomes that result from new actions taken than for negative consequences that are the consequence of inaction (*Kahneman & Tversky, 1982*). One of the key tools that can be used by policymakers at this stage to prevent backward movement is establishing the sunk cost effect. Individuals commit the sunk cost fallacy when they continue behaviour or endeavour as a result of previously invested resources (time, money or effort) (*Arkes & Blumer, 1985*). For example, one may tend to overeat as a consequence of over-ordering just to feel the money is worth, even if it is physically uncomfortable to do so. Once the initial investment by the decision-maker is made to start the venture (such as leaving the previous job, spending

time on working out the plans for start-up, payment made in registering the firm, etc.), it can under no circumstance be retrieved, even if he chooses to opt-out of the situation. Thus the task would be to increase the perceived sunk cost. This can be achieved by making the individual incur a slightly larger amount at the outset. Any subsidies can be back-ended. Also, there may be certain lock in period related to the securities provided by the decision-maker.

Confirmation bias

Confirmation bias occurs when people look for information in a way that fits with their existing thinking and preconceived notions. For example, a consumer who likes a particular brand is motivated to seek out customer reviews on the Internet that favour that brand. Confirmation bias has also been related to unmotivated processes, including primacy effects and anchoring, evident in a reliance on information that is encountered early in a process (*Nickerson, 1998*). Individuals at the third stage need to receive information that reinforces their decision to take up the chosen trade. For example, if a person has decided to set up a restaurant, he should be given information about the probabilities of success and potential profits in the trade. The decision-maker at this stage would be highly receptive to such kind of information. This may include social proofs from people they can relate to. The Policymakers also must make sure that the process of moving ahead in this stage is easier. This can be done by easing the decision process to go from Preparation stage to Action Stage. The decision process can be eased by simplifying documentation and wait time.

The decision process can be further simplified by minimising the number of decision situations (partitioning). The rate of consumption can be decreased by physically partitioning resources into smaller units. When a resource is divided into smaller

units (e.g. several packs of chips), consumers encounter additional decision points—a psychological hurdle encouraging them to stop and think. In addition to the cost incurred when resources are used, opening a partitioned pool of resources incurs a psychological transgression cost, such as feelings of guilt (*Cheema & Soman, 2008*). Related research has found that separate mental payment accounts (i.e. envelopes with money) can disrupt a shopping momentum effect that may occur after an initial purchase (*Dhar et al., 2007*). In the current situation, if the entrepreneur does not have to make multiple visits to get permissions for setting up, and all of the necessary documentation is done at one go, it can significantly increase conversion from Preparation to Action stage.

CONCLUSION

The theoretical framework used to predict utility and satisfaction of career choice based on life satisfaction, work satisfaction and work–life balance may have certain limitations. Impact of factors such as social and family expectations, gender roles, etc. may be studied further for any interaction effects, in future. Based on the above findings and discussion, it can be stated that although entrepreneurship seems to be the right way forward not just for the nation, but also for the individual, there is a significant psychological hurdle faced by the decision-maker in doing so. This manifests in form of irrationality in the decision-making process. Based on the above it can be claimed that the Government's initiative to make entrepreneurship aspirational is a right one. However, it must be considered that not opting for entrepreneurship and setting up a venture is a series of steps and thus entrepreneurship must be thought of as process or series of steps that the policymakers need to guide the decision-maker through. The same can be achieved more effectively by using customised behavioural nudges, suiting individuals at different stages of

entrepreneurship. There is significant scope of future research in understanding the impact of various nudges at different stages. Also focus of future research may be more towards innovation-oriented entrepreneurship, rather than simply factor-based or efficiency-based entrepreneurship.

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