

Self-efficacy Evaluation Survey on Chinese Employees: Case of Electronics Limited Company “X₁” (Shenzhen) & Investments Company Limited “X₂” (Beijing)

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Abstract: Psychologists in general, show interest in personal causation—how people organize, plan and bring change in their lives, how confident people feel and face new challenges. This research aims to investigate on employees’ self-efficacy level in Chinese companies. It provides major points employees need in the development of their abilities. Questionnaires are provided for employees in “X₁” and “X₂” respectively Electronics Co.; Ltd, (Shenzhen) and Investment Management Co.Ltd” (Beijing). We use excel to analyze the results obtained.

The findings are significant and motivational. More than 90% of employees have positive level of self-efficacy to perform task given. The more employees in the companies, the lower self-efficacy on their tasks. Employees’ level of self-efficacy plays a critical role and impacts on performance in the organizations. This study indicates a relationship between given tasks among employees—the high number of employees in an organization tends to reduce self-efficacy’s level, and negatively influences on performance.

This survey’s limitations derived from unavailability of sufficient funds and language barriers. But questionnaire was orally translated in Chinese.

Key words: Employees’ performance, motivational theory, organization, self-efficacy.

1. Introduction

Why do some employees feel motivated and willing to face new challenges, while others are not interested to solve difficulties? Why some managers demonstrate high levels of confidence in their abilities whereas others seem unsure and under-estimate themselves? The purpose of this study is an evaluation survey on self-efficacy of Chinese employees at the workplace. It is also a contribution to the literature review for future researchers. It generally presents a positive self-efficacy level on Chinese employees. The implementation of major points in part of conclusion will help them to develop their self-confident in their ability to achieve higher goals.

1.1. Definition of Self-efficacy

Bandura defined self-efficacy as "a judgment of one's ability to execute a particular behavior pattern. [1]" According to Wood, upon this definition, suggested that self-efficacy beliefs form a principal role in the process through which an individual's motivation and performance attainments are governed. Self-efficacy judgments also determine how much effort people will spend on a task and how long they will persist with it [2]. People with strong self-efficacy beliefs exert greater efforts to master a challenge while those with

weak self-efficacy beliefs are likely to reduce their efforts or even quit [3]-[6]. "Self-efficacy is the belief in one's capabilities to organize and execute the sources of action required to manage prospective situations" [7].

Bandura argues that there are four (4) main sources of personal beliefs about our efficacy--Performance accomplishment; vicarious' experience; social persuasion and physiological and emotional states.

All those can lead to negative judgments of one's ability to complete the tasks [8].

2. Literature Review

2.1. Power of Believing "You Can Do"

The concept of self-efficacy deals with the fact of believing that you can accomplish what you plan. It is one of the most important ingredients – perhaps the most important ingredient – in the recipe for success. According to Bandura, the basic premise of self-efficacy theory is that "people believe in their capabilities to produce desired effects by their own actions are the most important variable of the behaviors people choose to engage in and how much they insist on their efforts while facing obstacles and challenges [9]. Self-Efficacy, since Albert Bandura's publication on Psychological Review article "Self-Efficacy: Toward a Unifying Theory of Behavior Change," the term self-efficacy has become ubiquitous in psychology and related fields [10]. A lot of articles on imaginable aspect of self-efficacy have appeared and devoted to psychology, sociology, health, etc....

2.2. General Self-efficacy, Specific Self-efficacy and Performance

General self-efficacy relates to the beliefs in one's general capacity to perform tasks, but is not always predictive of a person's actual self-efficacy for the task that person is performing. Self-efficacy is measured at both general and domain specific level for this reason. General self-efficacy may or may not be correlate with domain specific self-efficacy (refers to beliefs in one's ability to perform specific tasks). General self-efficacy and domain specific are not mutually exclusive to each other. General self-efficacy beliefs can influence domain specific self-efficacy beliefs, both can influence to each other, so the same as a domain self-efficacy beliefs can influence general self-efficacy beliefs [9], [11], [12]. Domain specific self-efficacy has been measured in many diverse areas such as reading self-efficacy [13], parenting self-efficacy [14].

From the work of Bandura, Socio-cognitive theory suggests that self-efficacy beliefs operate in concert with goals system to enhance motivation and performance by increasing effort or persistence [10]. Locke and Latham suggested a high-performance cycle in which self-efficacy leads to the adoption of more difficult goals, and both self-efficacy and goals positively contribute to the motivation and performance [15]. Moreover, an overwhelmingly large accumulation of evidence from diverse empirical setting and methodological strategies has confirmed that self-efficacy is positively related to motivation and performance [11].

3. Methodology

3.1. Data Collections and Analysis Method

Employees received the questionnaires in Beijing and Shenzhen. Twenty-one questions (Q1.1 to Q1.21). The samples were sent to employees through department leaders & staff members. Each employee filled the questionnaire. The total sample was 80 that had been sent to the employees, but only 49 received feedback, more than 60%. We randomly developed and interpreted questionnaires' answers. Quantitative and qualitative approaches were used to complete the objective of this survey. "Excel" is used to orientate the work (correlations, percentages, regression analysis).The questionnaire variables need positive or negative answer (Not all true, hardly true, moderately true, exactly true).We mark each answer as following:

1= Not all true, 2=Hardly true, 3= moderately true, 4= exactly true.

3.2. Results and Analysis

Table 1. I Can Always Manage to Solve Difficult Problems if I Try Hard Enough

Variable	Quantity n	Percentage	Percentage Valid	Cumulative Percen.
Not all true	1	2.040	2.040	2.040
Hardly true	4	8.163	8.163	10.204
Moderate true	27	55.102	55.102	65.306
Exactly true	17	34.693	34.693	1
Total N	49	1	1	

Table 2. If Someone Opposes Me or against Me, I Can Find a Way to Get What I Want

Variable	Quantity n.	Percentage	Percentage Valid	Cumulative Per.
Not at all true	0	0	0	0
Hardly true	9	18.367	18.367	18.367
Moderately true	26	53.061	53.061	71.429
Exactly true	14	28.571	28.571	1
Total N	49	1	1	

Table 3. Correlation between Variable Q1.1 to Q1.21)

	Q1.1	Q1.2	Q1.3	Q1.4	Q1.5	Q1.6	Q1.7	Q1.8	Q1.9	Q1.10	Q1.11	Q1.12	Q1.13	Q1.14	Q1.15	Q1.16	Q1.17	Q1.18	Q1.19	Q1.20	Q1.21
Q1.1	1.000																				
Q1.2	0.261	1.000																			
Q1.3	0.113	-0.009	1.000																		
Q1.4	0.090	-0.062	0.440	1.000																	
Q1.5	-0.046	0.280	0.103	0.348	1.000																
Q1.6	-0.082	0.072	0.227	0.240	0.230	1.000															
Q1.7	0.054	-0.046	0.135	0.259	0.193	-0.082	1.000														
Q1.8	0.079	0.076	0.605	0.613	0.343	0.163	0.176	1.000													
Q1.9	0.414	0.307	0.425	0.164	-0.082	0.172	-0.161	0.257	1.000												
Q1.10	0.173	0.116	0.064	0.119	0.224	0.482	-0.178	-0.011	0.239	1.000											
Q1.11	0.231	0.224	0.127	0.141	0.105	-0.144	0.275	0.255	0.190	-0.194	1.000										
Q1.12	0.085	0.122	0.471	0.395	0.278	0.274	0.228	0.427	-0.006	0.024	-0.133	1.000									
Q1.13	-0.125	-0.133	0.178	-0.144	-0.032	0.230	-0.399	-0.014	0.217	0.258	-0.045	-0.104	1.000								
Q1.14	0.136	0.024	0.525	0.276	0.194	0.284	-0.028	0.415	0.250	0.131	-0.129	0.446	0.074	1.000							
Q1.15	0.019	0.170	-0.050	-0.159	-0.068	0.168	-0.066	-0.125	0.124	0.193	-0.102	-0.205	0.100	-0.206	1.000						
Q1.16	0.296	0.153	0.195	0.098	-0.101	0.239	-0.054	0.153	0.476	0.146	-0.167	0.237	-0.023	0.271	0.445	1.000					
Q1.17	-0.023	0.087	0.331	0.219	0.122	0.560	-0.138	0.255	0.394	0.310	-0.329	0.265	0.161	0.423	0.231	0.404	1.000				
Q1.18	0.166	-0.030	0.075	0.134	0.322	0.171	-0.087	0.344	0.161	0.071	0.111	0.038	0.341	0.144	0.067	0.261	0.150	1.000			
Q1.19	0.126	0.216	-0.043	-0.046	0.153	0.460	-0.148	-0.084	0.276	0.543	0.003	0.020	0.122	0.111	0.104	0.044	0.257	0.219	1.000		
Q1.20	0.240	0.178	0.066	-0.129	0.157	0.248	0.056	0.116	0.243	0.082	0.143	0.199	0.291	0.299	0.188	0.390	0.249	0.459	0.189	1.000	
Q1.21	0.074	0.081	-0.092	-0.045	-0.056	0.175	-0.436	-0.071	0.141	-0.043	-0.094	0.153	0.052	0.136	-0.258	0.226	0.148	0.200	0.254	0.029	1.000

#Correlation is significant at 0.1 (there is 95% chance there is a relationship between variables).

Correlation is significant at 0.25 (there is a true relationship between variables)

Most employees answered favorably to the variables “moderately true and exactly true” among de-pendent variables above. The higher scores obtained from “moderately true” and “Exactly true” in table1 and 2 justify the importance of those two variables. Generally, most employees have positive self-efficacy on given tasks. After calculation of percentages, we use correlation to determine the relationships that exist between the variables of surveyed employees (Q1.1 to Q1.21). According to the results, there exist true correlations over variables with an absolute value of 0.25 or above (these correlations are significant, means there is at least “95%” chance there exist a true relationship between the surveyed population).

Almost 90% of surveyed employees positively answered they can always manage to solve problem if they try hard enough (Table 1). 81% of people who are always able to solve problem think they can find a way to get what they want if someone opposes them. 65% of them argue that the main reason is that they can

remain calm when facing difficulties and they trust on their coping abilities. 83% of people that think they can find a way to get what they want answered they are in charge of making things happen (Table 3).

More than 80% of our sample population declared if someone opposes them, they can find a way to get what they want (Table 2). More than 83% (of people that can find a way to get what they want) feel in charge of making things happen. 65% of them said they can remain calm when facing difficulties because they can rely on their coping abilities (Table 3).

More than 60% of the surveyed participants said that is easy for them to stick to their plan and accomplish their goal. 58% of people saying that is easy for them, feel confident they could deal efficiently with unexpected events. 65% of them argue they can remain calm when facing difficulties because they believe in their abilities. 91% of them say if they are in trouble, they can usually find a solution. 80% of them spend time to identify a long-range goals, and 93% of them feel responsible for their own life (Table 3).

Almost 60% of surveyed population think they are confident that they could deal efficiently with unexpected events. More than 80% of those confident, feel in charge of making happen, and declared they can usually find several solutions when they are confronted with problem. 67% of them think to their resourcefulness and ability to figure things out. More than 90% of them said usually think a solution if they are in trouble (Table 3). More than 80% of them think spend time identifying long-range goals for themselves

Although “Moderately true” and “Exactly true” are the two favorable variables on the surveyed employees, is there any relationship between the two (on self-efficacy)?

Consider the two variables respectively as “moderate self-efficacy” and “strong self-efficacy”

H0: The employees have strong self-efficacy to achieve tasks (first hypothesis)

H1: The employees have moderate self-efficacy to achieve tasks (second hypothesis).

Table 4. Regression

SUMMARY OUTPUT								
<i>Regression Statistics</i>								
Multiple R	0.387602659							
R square	0.150235821							
Ajusted R Square	0.105511391							
Standard Error	4.497579458							
Observations	21							
<i>ANOVA</i>								
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>			
Regression	1	67.9495156	67.94951562	3.359144419	0.08255173			
Residual	19	384.336199	20.22822098					
Total	20	452.285714						
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t. Stat</i>	<i>P-Value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	25.06446991	2.28342542	10.97669742	1.14948E-09	20.2852056	29.8437342	20.2852056	29.8437342
Strong S.	-0.2382999	0.13001981	-1.832796884	0.082551729	-0.5104345	0.03383469	-0.5104345	0.03383469

$r = -0.387602659$

$P > 0.05$

After computing employees with “moderate self-efficacy” against those with “strong self-efficacy” in order to make a decision on our surveyed companies, the regression analysis shows the values of variance 4.497579458; Standard deviation 2.120.74974 and p-value 0.082551729. The conclusion is that surveyed employees are not significant with “strong self-efficacy”.

P-value > 0.05, H0 is rejected, H1 is accepted and confirmed the above alternative hypothesis and the level chance is as follow:

$(1 - \text{sig}) \cdot 100 = 91.74\%$

There is 91.74% chance employees of the two companies have “moderate self-efficacy” on specific given task.

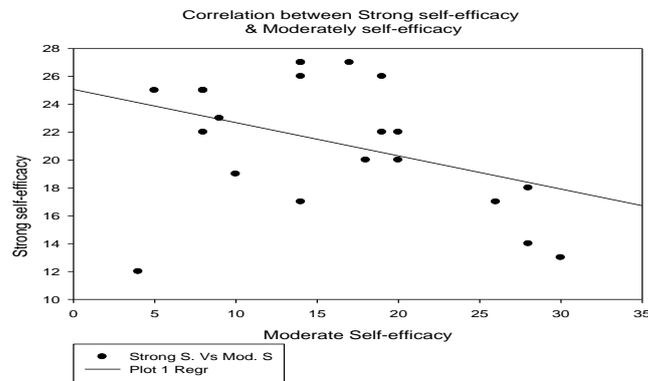


Fig. 1. Correlation between moderate S. & strong self-efficacy.

Fig. (1) shows the direction of major points that are around and on the straight linear. The absolute value of “r” correlation is significant, means there exist more than 90% chance that there is a true relationship between the variables. We can objectively state there is a true relationship between the two variables. As calculation shows a negative correlation coefficient “r”, then that relationship is negative. When employees who answered “moderate self-efficacy” increase, others with “strong self-efficacy” decrease. In conclusion, the more employees in the companies, the lower their self-efficacy for achieving specific tasks. In other words, higher number of employees tend to reduce the self-efficacy level, and this lower the degree of employees’ performance. In the present case, the increasing number of employees impacts negatively on the nature of personals self-efficacy.

4. Discussion and Limitations on This Research

Self-efficacy has been shown to apply across a wide range of situations and is a good predictor of sub-sequent performance and behavior, said Bandura. Employees find difficulties in some tasks, those with high self-efficacy level always try to respond efficiently to the problems in the organization. They have the abilities to set up higher goals facing the challenges and deal with unexpected events. Therefore it is clear that managers need to know which employees are more useful in the companies, which one can be enrolled and excelled in his or her carrier development. That is a concept of promoting the best employee in the best place which will help the organization to boost quick economically and easily dealing with challenges as far as market competition and globalization are concerned.

Overall analysis and results, it is clear that X1 and X2 companies have very few personal employees with weak self-efficacy to perform some specific tasks. For instance very few of them (almost 10%) declared they can’t always manage to solve difficult problems if they try hard enough. Moreover 18.63% and 36% of them think respectively that if someone opposes or against them, they are not able to find a way to get what they want, and it is not easy for them to stick to their plans and accomplish their goal. Almost 40% of surveyed population argue that they are not confident that they can deal with unexpected events, and that is not possible for them to handle whatever comes on their way.

Management decision making is not only related to the staff but also can be extended to the better employees, to allow them to participate in the debate, to have their own words to express without any influence. By that way organizations have better resistance, growth among many others. With “X1” & “X2” openly contribute to this research, the surveyed employees have greater development of self-efficacy level

through the above analyzes and results—the more employees in the companies intend progressively to the lower self-efficacy to perform given duties. Generally their employees have moderate self-efficacy (more than 90% chance), better performance at the workplace. The future development of those Chinese companies is evident nowadays where the world economy market is centralized.

There exist a limitation in this study, main constraints may be financial and distance because we could have translated that questionnaire in Chinese (language may be an obstacle to understand fully the questions). As well, we could have been to many companies instead of focusing on two (lack of financial support). But we use available resources to complete this study. We also base on the internet and other tools of communications like post office, phones....Another limitation derived from the use sampling in selecting the important employees of the companies that are sometimes unavailable.

5. Conclusion and Future Work

Overall, the current research demonstrates the validity of positive level of self-efficacy of employee at the Chinese workplace. The findings obtained show that employees’ self-efficacy play a critical role by impacting on work performance in the organizations. Positive self-efficacy level was observed between surveyed employees. This study indicates a true relationship between surveyed employees—we observed that the more employees present in an organization, the lower their self-efficacy level on task is. In other words, the high number of employees tend to reduce the self-efficacy level, and therefore low the degree of employees’ performance. People with strong self-efficacy beliefs exert greater efforts to master a challenge while those with weak self-efficacy beliefs are likely to reduce their efforts or even quit [3]-[6]. Our findings suggest there is a possible to enhance employees' work performance through training, management efforts to improve employees’ self-efficacy level. Table 5 provide major points to develop personal self-efficacy in the workplace

Table 5. Self-efficacy Major Points

Major points of self-efficacy development
Think positively, be confident and have passion at the work.
Deal with difficult tasks challenge, face and solve them
Persist and reach goals through more efforts
Be driven by a sense of purpose to achieve your goal
Be modest, patient and open mind to others at the workplace.
Feel in charge of making things happen
Think that you can find a way to get what you want if someone opposes to you
Accept failure, insufficient knowledge or abilities and learn from them.
Dream big, always aim for more
Stay focused and get more inspirations
Size all opportunities and be grateful
Think that hard time brings more opportunities.
Be your own top critic

Experiences and training are positively associated to self-efficacy. This means that employees with many experiences will have higher level of self-efficacy, which in turn will positively affect performance and job attitude. This last are widely general, it will pass through microscope for a future research.

References

- [1] Bandura, A. (1978). Reflections on self-efficacy. *Advances in Behavioral Research and Therapy*, 1(4), 237–269.
- [2] Wood, R. E., & Bandura, A. (1989). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. *Journal of Personality and Social Psychology*, 56, 407-415.

- [3] Bandura, A., & Schunk, D. H. (1981). Cultivating competence, self-efficacy, and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology*, 41(3), 586–598.
- [4] Brown, I., & Inouyne, D. K. (1978). Learned helplessness through modeling: The role of perceive similarity in competence. *Journal of Personality and Social Psychology*, 36(8), 900–908.
- [5] Schunk D. H. (1981). Modeling and attritional effects on children's achievement: A self-efficacy analysis. *Journal of Educational Psychology*, 73(1), 93–105.
- [6] Weinberg R. S., Gould D., & Jackson, A. (1979). Expectations and performance: An empirical test of Bandura's self-efficacy theory. *Journal of Sport Psychology*, 1(4), 320–331.
- [7] Bandura, A. (1994). Self-efficacy in Ramachaudran, v.s, Encyclopedia of Human behavior. 71-81.
- [8] Bandura, A. (1988). Reflection on non-ability determinants of competence. *Competence Considered: Perceptions of Competence and Incompetence across the Lifespan*, 315–362.
- [9] Bandura, A. (1977). *Theoretical Model of Self-efficacy*. General Learning Press, NY.
- [10] Bandura, A. (1997). Self-efficacy. *The Exercise of Control*. W. H. Freeman & Co, New-York.
- [11] Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, 88, 87-99.
- [12] Steyn, R., & Mynhardt, J. S. (2008). Factors that influence the forming of self-evaluation and self-efficacy perceptions. *African Journal of Psychology*, 38(3), 563-573.
- [13] Durik, A.M., et al. (2006). Task values and ability beliefs as predictors of high school literacy choices: A developmental analysis. *Journal of Educational Psychology*, 98(2), 382-393.
- [14] Kendall, S., & Bloomfield, L. (2005). Developing and validating a tool to measure parenting self-efficacy. *Journal of Advanced Nursing*.
- [15] Locke, E. A., & Latham, G. P. (1990). A theory of goal setting and task performance.



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