Entrepreneurial competencies effect on Small and Medium Enterprises performance through the mediation effect of psychological contracting of outsourcing.

An empirical study on the Information Technology Sector in Egypt

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Abstract

This study aims to study the entrepreneurial competencies, international outsourcing relationship components and SME performance factors, and to develop a model to test the relationship between entrepreneurial competencies and Psychological contracting of outsourcing, between outsourcing relationship and Small and medium enterprises performance. Finally, it seeks to identify the effect of Psychological contracting on the relationship between the entrepreneurial competencies and Small and medium enterprises Performance. The Study was conducted on SMEs in IT sector, which constitute the whole bulk of the industry. A questionnaire was administrated and the results did a relationship between the above-mentioned variables with varying degrees of importance.

1 Introduction

Small enterprises is defined as independent, single management and a relatively small share of the market (Bolton 1971). Watson et al, 1993 defined small business as owners of sole proprietorship and partnerships. Small business tends to have smaller number of customers (Cosh and Hughes 2000). The role of a small business in any economy is a critical especially in developing nations. Also, the role of its owner do affect the survival of the businesses especially in Small enterprises. This study aims to assess the importance of the owner's competency in an SME success through his ability to develop international relationships with clients or partners.

2. Literature review

2-1 Entrepreneurial Competencies:

Developing a new business venture is one of the most complex degrees and it includes lots of uncertainties and conflicting relationships between behavior and performance along with many interactive factors such as motivations, cognitive abilities and environmental factors. (Campell 2003). Mccloy et al 1994 suggested that a successful entrepreneur would have to possess a requisite knowledge, master the requisite skill and choose to work on the tasks for some period at some level of effort. A successful entrepreneur is defined as an individual with traits, such as specific knowledge, motives, features, self-images, social roles and abilities, which result in venture's success (Bird 1995). Such Knowledge, motives, features would lead us to an entrepreneur is someone with a unique competencies. An Entrepreneurial competency is the capability of entrepreneurs to face effectively a critical situation by making sense of environmental constraints and by activating relational and internal specific resources' (Iandoli, 2007: 17) Man et al, (2002) identified six areas of competencies associated with the firm's performance, i.e., opportunity competencies, relationships competencies, conceptual

competencies, organizing competencies, strategic competencies, and commitment competencies. In addition to competencies required by entrepreneurs, entrepreneurs are engaged in 3 important roles: the entrepreneurial role; the managerial role and the technical role (Baum & Locke 2004). The entrepreneurial role is important at the start of the business while the managerial role was for running the business. (Man & Lau, 2002).

2-2 Outsourcing relationship and Psychological Contracting in ICT sector:

Within the ICT sector, consisting largely of SMEs that develop and commercialize their own technology products, global commercialization is viewed as a necessary imperative, rather than a matter of choice (Crick and Spence 2005; Smallbone and North 1995). Research has identified that for SMEs and entrepreneurial companies, the ability to create and use networks can facilitate product commercialization across international markets (Chetty and Wilson 2003; Coviello and Munro 1997). Nowadays according to recent developments in many industries, outsourcing started to get be deeply involved in more value added and core functions. Many US-based and European companies are getting to outsource main core functions in their businesses. One of the main antecedents of such is cost savings and profit proliferations in many areas. In nearly every industry, traditional ways of operations are getting to be replaced by a new form of operations based on strategic alliances between different functions, the pioneer in such field was the financial sector and still lots to come. (Alverez, Couta and Disher, 2003). Business Outsourcing can be simply defined as devising a contract with an external organization to take primary responsibility of providing business processes (Yang, Kim, Nam, & Min, 2007). Business outsourcing has become an ever-increasing trend in today's highly competitive markets. Firms can embark either on internal off-shoring (by setting up their own centers or subsidiaries in foreign countries while maintaining full ownership and control) or external off-shoring (by handing over business functions to independent foreign providers). Outsourcing varies significantly from other modes of market entry such international joint ventures (Nahar, Kakola and Huda, 2001 a). In a pure outsourcing contract business relation between outsourcing service provider and outsourcing service user can be terminated after one contract, conversion/migration/re-engineering. International outsourcing or subcontracting can be considered as a one time or short term production cooperation since one company is using the production capacity of the other company. Many software & information system firms internationally outsource on a continuous basis to different outsourcing service providers who can provide high quality and competitive service, whereas in international joint ventures, the partners established a new legal entity.

The development of outsourcing relationships evolves through many phases. It starts with the cost stage where the focus of the outsourcer is to reduce the production costs and maximize his profits. The contract duties and responsibilities, goals underlying the arrangement are emphasized in this phase. However, cooperation is still important for mitigating internal and external hazards (Gottschalk and Saether, 2006). In the second stage, resource stage, the unique resources of the organization both tangible and intangible are viewed as a collection of resources distributed among industries. The value generation potential is a composite of the client characteristics, client vendor relationship & vendor characteristics. Then finally, the last phase in the relationship, the partnership phase, the emphasis is on intangibles such as trust, comfort, understanding, cooperation, shared values goals, and problem solving, interpersonal relationship and regular communication referred to as alliance. According to relational exchange theory, a partnership is dependent on common norms (expectations about behaviors), and norm development. The development of such relationship depended on how well each party meets

his obligation, which will lead us to our mean determinant of an outsourcing relationship between the outsourcer and the outsourcee. Khon et al, 2004. Conducted a qualitative study to identify the supplier and customer obligations in an IT outsourcing relationship. They also conducted a survey to test the effect of such obligations on outsourcing success. They developed six main obligations to be satisfied by suppliers of an IT outsourcing relationship. These were (1) accurate project scoping, (2) clear authority structures, (3) taking charge, (4) effective human capital management, (5) effective knowledge transfer, and (6) building effective interorganizational teams. Kim et al, 2007, tested the effect of psychological contracting as a direct effect between Partnership and outsourcing success and it proved to have a significant mediating effect as well as a direct effect on outsourcing success.

2-3 SME Performance:

Internationalization may reduce costs, extend innovation capabilities, aid knowledge acquisition, and thus produce competitive advantages (Geringer et al., 1989). In addition, the nature of the relationship between internationalization and performance has also been tested. Some scholars have proposed that the relationship between the two is positive due to the opportunities uncovered in other geographical regions (Delios and Beamish, 1999), the influence of corporate entrepreneurship (Luo et al., 2005), and the increase of market power (Kim et al., 1993). Another group of scholars found a negative or non-existent relationship between internationalization and performance, and argued that global diversification represents a cost related to the agency relationship between managers and investors (Denis and Yost, 2002). Some scholars posit a U-shape relationship between international diversification and performance (Lu and Beamish, 2001). In the early stage, internationalization may increase a firm's costs because of newly generated complexity for governance. Nevertheless, performance will start to increase after firms get acquainted with the environment and acquire new knowledge and capabilities. Previous studies provided mixed results on the impact of internationalization on firm performance. Another article investigates the relationship between internationalization and performance. It suggests that performance is not determined by export intensity and the number of international agreements, but by the ability of firms to gain access to specific markets, such as North America. Moreover, the article finds that performance tends to suffer when SMEs internationalize through FDI, a finding that suggests a 'liability of foreignness' effect at international expansion.

However, this negative effect can be offset by the international competencies that SMEs develop through intense export activity (Mazouchi and Zucchilla, 2003), Which led to the choice of less costly modes of internalization as an alternative for IT companies seeking expansion. In order to reach to a measurement criteria, a study was conducted to test the application of balance scorecard dimensions of performance on the SMEs. The results indicated that SMEs usually adopt a bottom up approach. This means that although the framework is very capable of measuring and improving performance, Performance in SMEs is not based on any form of strategy (Hudson et al, 2001). The introduction of new performance measures in these companies was initiated both internally and externally. The main internal trigger was as a reaction to problems that had occurred. This supports the reactive management style found in the majority of SMEs. Other internal triggers focused on attaining a greater level of control, particularly for resource planning. External triggers mainly originated from customers that requested or imposed specific measures. However there are still some businesses who use a simple and may be a limited criteria, businesses apply some non-financial returns to measure its success as they survive longer in business (Chong, 2008). The owner's managers of SMEs use a

hybrid approach on measuring performance due to their concerns on meeting the financial results as well non-financial returns. Financial measures include profits and turnover while non-financial measures are the long-term growth and survivals of the organizations.

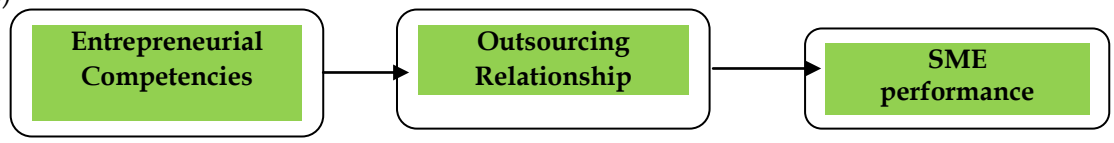
2-4 Entrepreneurial competencies and International Outsourcing Relationship:

Entrepreneurs' networks and international knowledge acts as a moderating factor between internationalization and internationalization (Oviatt & Mcdougel, 2005). Networks help entrepreneurs identify international opportunities, establish credibility, and often lead to strategic alliances and other cooperative strategies. There are strong ties and weak ties in networks. As of Knowledge of the host country and the intensity of such knowledge do affect the internationalization speed. Feeny et al, 2004, developed 12 main vendor capabilities that are critical for Business process outsourcing provider's success. Such capabilities are as follows; Delivery Competency, Transformation Competency, and Relationship Competency.

1- **Conceptual Framework**

The following is the relationship between the variables, entrepreneurial competencies, outsourcing relationship & SME success.

Fig (1)



2- Hypothesis Development

H1: There is a significant relationship between entrepreneurial competencies and Psychological contracting of Outsourcing.

H1-a: there is a significant relationship between opportunity seeking competencies and Psychological contracting of Outsourcing

H1-b: there is a significant relationship between relationship building competencies and Psychological contracting of Outsourcing.

H1-c: There is a significant relationship between Conceptual competencies and Psychological contracting of Outsourcing

H1-d: There is a significant relationship between organizing competencies and Psychological contracting of Outsourcing.

H1-e: There is a significant relationship between strategic thinking competencies and Psychological contracting of Outsourcing.

H1-f: There is a significant relationship between commitment competencies and Psychological contracting of Outsourcing.

H2: There is a relationship with statistical significance between Psychological contracting of Outsourcing and SME performance.

H2-a: there is a significant relationship between Authority Structure as a component of Psychological contracting of Outsourcing and SME performance.

H2-b: there is a significant relationship between dedicated staff as a component of Psychological contracting of Outsourcing and SME performance.

H2-c: There is a significant relationship between taking charge as a component of Psychological contracting of Outsourcing and SME performance.

H2-d: There is a significant relationship Knowledge sharing as a component of Psychological contracting of Outsourcing and SME performance.

H2-e: There is a significant relationship between effective inter-organizational relationship as a component of Psychological contracting of Outsourcing and SME performance.

H3: The psychological contracting of outsourcing variable is mediating the relationship between Psychological contracting of Outsourcing and SME performance.

3- Research design

A cross sectional research design was conducted. A survey was administrated through a questionnaire using a Likert scale for entrepreneurial competencies, indicating the level of importance to be attached to each dimension for all six competencies dimensions, where 1 represent the least important and 5 is highly important. The scale for entrepreneurial competencies of Man and Lau (2000) was used in this study. The second variable is the outsourcing relationship using the psychological contracting dimensions from a supplier perspective listed in Khon et al, (2004) study. The scale was represent as follows; 1 as not fulfilled and 5 as completely fulfilled. Whereas the SME performance was tested through 5 questions with different categories of choices. The profit increase was measured from 1 to 4, were 1 is the least profit and 4 is the over 20% increase in profits. The increase in number of employees were measured, as 1 is an increase from 5 to 9 and 5 as an increase over 20 new employees. Also, the number of projects and the number of projects conducted with the same client, in addition to the period of time the business has been involved in international outsourcing projects.

4- Sampling Method

The questionnaire was distributed among Egyptian software companies located in Cairo and Alexandria governates in Egypt. The study is cross sectional, using the random sampling of the 200 CEO Managers for 200 companies enrolled, 100 managers were interviewed. The List of companies were collected from the ITIDA governmental institute responsible for supporting software companies in Egypt.

5- Data Analysis

7-1 Factor analysis:

7-1-1 conducting the Factor analysis for the Entrepreneurial competencies:

As of the results of the factor analysis for Entrepreneurial competencies (table 1), there are five factors extracted. Such factors were extracted as of an Eign value higher than 1, also, using both scree plot and the percent of variations as follows:

1- The first factor include the following statements (4, 5, 6, 7, 8, 9, 10, 38, and 39), this factor explains 18.468 of total variation and it is called relationship and commitment capabilities.
2- The second factor include the following statements (28, 29, 30, 31, 32, 33, 34, 35, 36, and 37), this factor explains 16.813 of total variations and it is called strategic thinking competency.
3- The Third factor include the following statements (18, 19, 20, 21, 22, 23, 24, 25, 26, and 27), this factor explains 15.275 of total variation and it is called organization competency.
4- The Fourth factor include the following statements (1, 2, and 3), this factor explains 15.128 of total variation and it is called opportunity seeking competency.
5- The Fifth factor include the following statements (11, 12, 13, and 14), this factor explains 15.128 of total variation and it is called opportunity seeking competency.

Table (1): Factor analysis for entrepreneurial competencies

code	Item	Components					Communalities
		1	2	3	4	5	
V1-SUB 2-1	4. Build and keep relationships with clients for a long period of time	.751					.780
V1-SUB 2-2	5. Negotiate with business partners	.665					.789
V1-SUB 2-3	6. Build and keep trust and confidence with employees	.733					.763
V1-SUB2-4	7. Build and keep trust and confidence with clients	.755					.804
V1-SUB2-5	8. Maintain a personal network of work contacts.	.756					.758
V1-SUB2-6	9. Understand what others mean by their words and actions.	.668					.621
V1-SUB2-7	10. Communicate both formally and informally with employees.	.787					.735
V1-SUB6-1	38. Dedicate to make the venture work whenever possible.	.621					.562
V1-SUB6-2	39. Refuse to let the venture fail whenever appropriate.	.581					.414
V1-SUB5-1	28. Set achievable and realistic goals.		.627				.739
V1-SUB5-2	29. Set contingency plans.		.708				.747
V1-SUB5-3	30. Be responsive in your plans to changes in environment		.762				.763
V1-SUB5-4	31. Move ahead towards achieving goals systematically.		.593				.671
V1-SUB5-5	32. Redesign the department and/or organization to better meet long-term objectives and changes.		.702				.689
V1-SUB5-6	33. Align current actions with strategic goals.		.818				.779
V1-SUB5-7	34. Assess and link short-term, day-to-day tasks in the context of long-term direction.		.722				.623
V1-SUB5-8	35. Monitor progress toward strategic goals.		.629				.653
V1-SUB5-9	36. Evaluate results against strategic goals.		.736				.802
V1-SUB5-10	37. Determine strategic actions by weighing costs and benefits.		.600				.679
V1-SUB4-1	18. Plan the operations of the business.			.698			.788
V1-SUB4-2	19. Plan the organization of different resources.			.763			.702
V1-SUB4-3	20. Keep the organization run smoothly.			.717			.709
V1-SUB4-4	21. Organize resources.			.800			.792
V1-SUB4-5	22. Coordinate tasks.			.690			.779
V1-SUB4-6	23. Set targets and Supervise subordinates.			.69			.715

				0			
V1-SUB4-7	24. Lead subordinates.			.684			.811
V1-SUB4-8	26. Motivate people.			.644			.648
V1-SUB4-9	27. Delegate responsibilities to capable employees.			.568			.615
V1-SUB1-1	1. Identification of services customers want.				.763		.751
V1-SUB1-2	2. Perceive unmet consumer needs.				.695		.665
V1-SUB1-3	3. Take advantage of business opportunities				.739		.676
V1-SUB3-1	11. Analyze, evaluate and make decisions intuitively					.613	.745
V1-SUB3-2	12. Generate alternative solutions for problems					.660	.785
V1-SUB3-3	13. Monitor progress toward objectives.					.566	.717
V1-SUB3-4	14-Innovate in services, image, and use of technology					.752	.824

The scree plot started to slope downward as of the 5th factor where the eign-value after rotation was 1.117 and the cumulative variation was equal to 71.695%. The Eigen-values for the first 5 factors extracted and their percentage of variance is, total accumulative, 71.695 % percentage which is an acceptable percentage to be considered in the social sciences studies. Also the Kaiser Meyer Olken measure (KMO), the measure for sample adequacy is .931 which is higher than 0.5. Also, most of the communalities is higher than .5 which prove that such variables are highly correlated with factors.

7-1-2 conducting the Factor analysis for the Psychological contacting of International outsourcing relationship components:

As of the results of the factor analysis for psychological contracting (table 2), there are five factors extracted. Such factors were extracted using the both Eigen-value higher than 1 and the percent of variations as follows:

1- The first factor include the following statements (17,18,19), this factor explains 16.892% of total variation and it is called Building inter-organizational relationships
2- The second factor include the following statements (4, 5, and 6), this factor explains 16.143% of total variations and it is called Authority structure.
3- The Third factor include the following statements (1, 2, 3, 10, and 11), this factor explains 16.140 % of total variation and it is called Project scoping and dedicated project staffing.
4- The fourth factor include the following statements (7, 8, and 9), this factor explains 15.735 % of total variation and it is called Taking charge.
5- The fifth factor include the following statements (13, 14, and 15), this factor explains 14.460 % of total variation and it is called Knowledge sharing.

Table (2): Factor analysis for psychological contracting of international outsourcing

Code		*Component*					*Communalities*
		1	**2**	**3**	**4**	**5**	
V2-SUB6-1	17. Invests time in building a good relationship with clients	.862					.898
V2-Sub6-2	18. Have a common or joint sense of mission and purpose with clients	.901					.913
V2-SUB6-3	19. Work as a team with clients	.85					.881

		0					
V2-SUB2-1	4. Define precisely the roles of each party		.851				.884
V2-SUB2-2	5. Define precisely the responsibilities of each party		.868				.914
V2-SUB2-3	6. Lay out clearly what each party is to perform		.821				.896
V2-SUB1-1	1. Estimates the contract scope accurately			.696			.721
V2-SUB1-2	2. Accepts scope change without additional charge			.894			.811
V2-SUB1-3	3. Build buffer into contract to accommodate scope changes			.670			.742
V2-SUB4-1	10. Assign adequate staff dedicated to the project (i.e., few staff changes)			.565			.600
V2-SUB4-2	11. Keep customer staff turnover low during the project			.499			.598
V2-SUB3-1	7. Work independently (i.e., minimal reliance on clients) in getting the job done				.793		.773
V2-SUB3-2	8. Complete the job with minimal disruption to client operations				.789		.786
V2-SUB3-3	9. Solve problems with minimal involvement of clients				.852		.842
V2-SUB5-1	13. Transfer knowledge to client's staff					.758	.786
V2-SUB5-2	14. Share best industry practices with clients					.796	.898
V2-SUB5-3	15. Transfer know-how of the product or service to clients					.840	.913

The Eigen-values for the first 5 factors extracted and their percentage of variance is accumulative79.370% percentage is an acceptable percentage to be considered in the social sciences studies. Also the Kaiser Meyer Olken measure (KMO), the measure for sample adequacy is .836 which is higher than 0.5. Also, most of the communalities is higher than .35 which prove that such variables are highly correlated with factors.

7-2 **Reliability test:** As a result, the following table shows the reliability Cronbach's alpha for the variables as follows:

Table 3: reliability analysis for all variables

Scale	**Cronbach's alpha**
Entrepreneurial competences	.936
Outsourcing relationship components	.923
SME success	.701

All of the three main variables have been reliable since we have all of them with crookback alpha higher than .936, .923, and .701

7-3 testing the first hypothesis: The Effect of Entrepreneurial Competencies on Psychological contracting

To test the first hypothesis, Correlation & regression analysis was used to formulate a model. The correlation was used and tested using Spearman coefficient at significance level of 5% .Table (4) shows a summary of all correlations between competencies and psychological contracting in international outsourcing.

Table (4): Correlation between entrepreneurial competencies and psychological contracting

Sentences	*Correlation*	*Sig*
Opportunity Seeking competency	.243	.000
Relationship building competency	.442	.000
Conceptual competency	.439	.000
Organization competency	.250	.000
Strategic thinking competency	.392	.000
Commitment competency	.276	.000

As of the Mentioned above table, the p- value is less than 0.05 and the correlations are highest with conceptual competency (.439), Relationship building competency (.442), strategic thinking (.392), which shows that there is a relationship between entrepreneurial competencies and psychological contracting of outsourcing relationship, however this contracting relationship is more significant with specific competencies such as conceptual competency, relationship building and strategic thinking competency.

Multiple Regression between competencies and Psychological contracting

A regression was conducted to test the relationship between entrepreneurial competencies and outsourcing relationship. According to the collinearity diagnostics and correlation between independent variables, the regression conducted using the variables did result, in a high VIF as a result; a factor analysis is used to extract variables, so variables were turned to factors (Lynch 2003). The regression was conducted using the factors extracted from factor analysis. The regression did show the following results in table (5).

Table (5): the multiple regressions results between Entrepreneurial competencies and Psychological contracting

R-square	**.250**			
Value	**14.382**		**p-value**	**.000**
	B	**Std. Error**	**t**	**Sig**
(Constant)	3.895	.035	109.871	.000
Relationship and commitment competencies	.213	.036	5.988	.000
Strategic thinking competency	.188	.036	5.304	.000
Organization competency	-.007	.036	-.204	.839
Conceptual competency	.194	.036	5.454	.000
Opportunity seeking competency	.070	.036	1.970	.050

The results of the R Square are .250, which is a bit lower than the acceptable result for social sciences where the acceptable results, R square lies between .3 and .4. Also the F stat significance was less than .05, the competencies explain 25% of the changes of psychological contracting in international outsourcing. This can be attributed to the fact that there are other

factors than entrepreneurial competencies of the supplier. The client side plays an important part in determining the psychological contracting for the supplier side. This Model illustrates the following as of the entrepreneurial competencies and their relationship with the fulfillment of psychological contracting.

As of the Relationship building and commitment competencies, the more important Relationship building and commitment competencies, the higher the fulfillment of psychological contracting which is plausible to happen. The coefficient of such competency is .204. As a result, we expect an increase in strength of psychological contracting of the relationship by .207 for each unit increase in psychological contracting and commitment competency. We can consider such relationship as the level of significance is less than 5%, As for Strategic thinking competency, the more the importance "Strategic thinking competency", the more fulfillment of the psychological contracting components, the coefficient is .185 which is considered to be with a mild effect on psychological contracting components also the level of error is lower than 5%, .000. As a result, we can consider the effect of such competency on the psychological contracting. As of the Opportunity seeking, this competency has a small coefficient (.049). So the results show that the higher the Opportunity seeking, the higher the fulfillment of the psychological contracting components. However, there is a significance level higher than 5%. As a result, we cannot consider it due to the high level of significance, so we can consider that Opportunity seeking is more of no effect on psychological contracting fulfillment or with zero value. As of the "Conceptual" competency, this competency has a moderate coefficient (.251). So the results show that the more the "Conceptual" competency, the higher the fulfillment of the psychological contracting components which is plausible to happen. Also, there is a significance level lower than 5%, as a result, and so we can consider that "Conceptual" competency is of moderate effect on psychological contracting fulfillment.

As for Organization competency, this competency has an inverse coefficient relative to other competencies (-.016). As of such coefficient, we can say the higher the importance of the effect of planning and organizing resources, the lower is the psychological contracting, which is not plausible to consider taking in consideration the level of significance that is higher than 5%.

On further analysis, the variation of such results among different levels of experience on competencies was tested, the researcher conducted a cross tabulation to identify if there is association between the level of experience and competencies and identify the strength of association. There was a significant association with entrepreneurial competencies and level of experience in IT international outsourcing projects, its chi square is 64.237, with p-value less than 5% and the strength of the association was .487 which is relatively a strong association. So changes in the significance of competencies would vary with increased level of experience.

7-4 Testing Hypothesis 2: The effect of Psychological contracting on SME Performance

In the following section, a summary correlation is made between Psychological contracting and SME performance, then a multiple regression is done to test all psychological contracting components on SME performance. In testing the relationship between all sub-variables and SME performance, table (6) is the summary of the correlations:

Table (6): summary correlation between psychological contracting components and SME performance

Sub-variable	*Correlation*	*Significance*
Project scoping	.222	.000
Authority structure	.206	.000
Dedicated project staffing	.230	.000

Taking Charge	.263	.000
Knowledge Sharing	.093	.122
Build effective inter-organizational relationships	.255	.000
Psychological contracting of international outsourcing	.322	.000

As it is clear from the above table, the highest correlation was for taking charge (263), Build effective Inter-organization (.255), then dedicated project staffing (.230). Each of those components are having a moderate correlation with SME performance. However, Total Psychological contracting did show a higher correlation (.322).

Multiple Regression between Psychological contracting and SME Performance.

On testing the relationship between the outsourcing relationship and SME performance, a multiple regression was conducted and the following regression results are extracted. According to the collinearity diagnostics and correlation between independent variables, the regression conducted using the variables did result, in a high VIF as a result, a factor analysis is used to extract variables, so variables were turned to factors (Lynch 2003). The regression was conducted using the factors extracted from factor analysis. The regression did show the following results in table (7).

Table (7): The multiple regression results between psychological contracting components and SME performance

R-square	**.107**			
F-value		**p-value**	**.000**	
	B	**Std. Error**	**t**	**Sig**
(Constant)	2.533	.040	63.907	.000
Building effective inter-organization relationship	.128	.039	3.312	.001
Authority structure	.092	.039	2.372	.018
Project scoping and dedicated project staffing	.083	.038	2.179	.030
Taking Charge	.133	.039	3.458	.001
Knowledge sharing	-.019	.040	-.482	.630

The results in table () shows the R Square is .107, which is a relatively a low value for R square compared to social sciences result, where the R square lies between .3 and .4. As a result, the relationship components can hardly predict the variations in the dependent variable. However, the F stat significance was less than .05, .000 which shows that this is a significant relationship. This Model illustrates the following as of the fulfillment of psychological contracting of international outsourcing components and SME performance.

As of the **Building effective inter-organization relationship**, Psychological Contracting components, the more the fulfillment of Building effective inter-organization relationship factor, the higher the possibility of SME performance which is plausible to happen. The coefficient of such component is .129. As a result, we expect an increase by 12.9% for each unit increase in relationship component. We can consider this effect, as the level of significance is less than 5%. As for **Authority structure**, the more the fulfillment of "**Authority structure"**, the higher the possibility of SME performance. The coefficient is .092 which is considered to be with a small effect on relationship components, also the level of error is lower than 5%. As a result, we can consider the effect of such component on the SME performance. As for **Project scoping and dedicated project staffing**, this component has a small coefficient (.083) relative to other relationship components. As of such coefficient, we can say the more the fulfillment of Project scoping and dedicated project staffing, the higher the SME performance, which is plausible to

consider taking in consideration the level of significance which is lower than 5%. So we can consider that Project scoping and dedicated project staffing is of an effect on SME performance.

As of the Taking charge, this relationship component has a small coefficient (.133). So the results show that the higher the fulfillment Taking charge, the higher the possibility of SME performance. However, there is a significance level lower than 5%. As a result, we can consider it due to the low level of significance, so we can consider that Taking charge is of an effect on SME performance. As of the Knowledge sharing, this relationship component has an inverse coefficient (-.019). So the results show that the higher the fulfillment of knowledge sharing, the higher the possibility of SME performance. However, there is a significance level higher than 5%. As a result, we cannot consider it due to the high level of significance, so we can consider that Knowledge sharing is of no effect on SME Performance.

On further analysis, the variation of such results among different levels of experience on Psychological contracting is tested, the researcher conducted a cross tabulation to identify if there is association between the level of experience and competencies and the strength of association. There was a significant association with psychological contracting and level of experience in IT international outsourcing projects, its chi square is 39.218, with p-value less than 5% and the strength of the association was .364 which is relatively a moderate association. So changes in the significance of psychological contracting components would vary with increased level of experience.

7-5 Testing Hypothesis three: the Mediation effect of Psychological contracting on the relationship between Entrepreneurial Competencies and SME Performance

In order to test the effect of Psychological contracting on the relationship between entrepreneurial competencies, a mediation test was conducted through testing the significance of the three relationship between entrepreneurial competencies and Psychological contracting in international outsourcing,(the main independent variable and the mediator), entrepreneurial competencies and SME performance (independent variable and the dependent variable), then between Psychological contracting in international outsourcing and SME performance (mediator and dependent variable) (Baron and Kenny, 1986;Mackinnon,Fairchild & Fritz, 2007).

The Effect of Entrepreneurial Competencies on Psychological contracting:

Table (8) shows the results of the regression of entrepreneurial competencies as a total on Psychological contracting.

Table (8): Regression results for total entrepreneurial competencies on Psychological contracting

R-square	**0.141**			
F value	44.148	**P-value**	0	
	B	**Std. Error**	**T value**	**Sig**
(Constant)	1.880	.306	6.153	.000
Entrepreneurial competencies	.502	.075	6.644	.000

As it is clear from the table (8), that the F value of the relationship is 44.148 and its p-value is less than 5%, as a result we can accept that there is a significant relationship between entrepreneurial competencies and the Psychological contracting variable. This confirms with the results that were tested in the sub-variables; however, we can hardly consider the entrepreneurial competencies are a variable with a high predictive variable by itself due to the relatively small value of the r-square. The coefficient of the Entrepreneurial competencies is

significant, as the t Value is 6.644 and p-value is less than 5% (.000) and it has a value of (.502), also the constant of the equation is significant with t value equal to 6.153 and its p-value is less than 5%(.000) . The low value of the R square can be attributed to the fact that psychological contracting include more than one party and the researcher is testing the supplier side of the transaction only. Also, there are many other variables that affect the supplier and the client which can add to the predictability of the model.

The effect of entrepreneurial competencies on SME performance.

Table (9) shows the results of the regression of the effect of entrepreneurial competencies on SME performance.

Table (9): regression results for the effect of entrepreneurial competencies on SME performance

R-Square	**0.095**			
F Value	26.182	P-value	0	
	B	**Std. Error**	**T value**	**p-value**
(Constant)	.890	.324	2.751	.006
Entrepreneurial competencies	.412	.080	5.117	.000

As it is clear from the table (9), that the F value of the relationship is 26.182 and its p-value is less than 5%, as a result we can accept that there is a significant relationship between entrepreneurial competencies and the SME performance. This confirms with the results that were tested for the multiple regression of entrepreneurial competencies and SME performance; however, we can hardly consider the entrepreneurial competencies are a variable with a high predictive variable by itself due to the relatively small value of the r-square. The coefficient of the Entrepreneurial competencies is significant, as the t Value is 5.117 and p-value is less than 5% (.000) and it has a value of (.412), also the constant of the equation is significant with t value equal to 2.751 and its p-value is less than 5%(.000) . The low value of the R square can be attributed to the fact that SME performance include more than Entrepreneurial competencies, there are other factors attributed to the environment, industry and other constraints on SMEs and the researcher is testing the Entrepreneurial competencies only. There are many other variables that can affect the variable which can add to the predictability of the model.

The effect of Psychological contracting in international outsourcing on SME performance.

Table (10) shows the effect of psychological contracting in international outsourcing on SME performance.

Table (10): Multiple Regression results of Psychological contracting on SME performance

R-Square	**0.075**			
F Value	**22.713**	**P-value**	**0**	
Model 3	**B**	**Std. Error**	**T Value**	**p-value**
(Constant)	1.486	.324	6.725	.000
Psychological contracting	.269	.080	4.766	.000

As it is clear from the table (10), that the F value of the relationship is 22.713and its p-value is less than 5%, as a result we can accept that there is a significant relationship between Psychological contracting and the SME performance. This confirms with the results that were tested for the multiple regressions of Psychological contracting components and SME

performance; however, we can hardly consider the psychological contracting are a variable with a high predictive variable by itself due to the relatively small value of the r-square. The coefficient of Psychological contracting is significant, as the T value is 4.766 and p-value is less than 5% (.000) and it has a value of (.412), also the constant of the equation is significant as the T value equal to 6.725 and its p-value is less than 5%(.000) The low value of the R square can be attributed to the fact that international outsourcing relationship include more than one party both the supplier and the client side. Also, there are many other variables such as environment that can affect the SME performance which can add to the predictability of the model. As it is clear from the results of the above regressions, between entrepreneurial competencies and Psychological contracting, entrepreneurial competencies and SME performance and finally Psychological contracting and SME performance, all of such regressions shows a significant relationships due to the significance of the F value in all regressions also the significance of all coefficients, which would lead us to the conclusion that Psychological contracting is mediating the relationship between entrepreneurial competencies and SME performance.

The effect of psychological contracting and Entrepreneurial competencies on SME performance.

Table (11) shows the results of the effect of psychological contracting and Entrepreneurial competencies on SME performance.

Table (11): regression results of psychological contracting and Entrepreneurial competencies on SME performance

R-Square	**0.142**			
F Value	22.713	**P-value**	0	
Model 4	**B**	**Std. Error**	T value	p-value
(Constant)	.448	.338	1.324	.187
Psychological contracting	.228	.063	3.642	.000
Entrepreneurial competencies	.303	.084	3.607	.000

As it is clear from the table (11), that the F value of the relationship is 22.713and its p-value is less than 5%, as a result we can accept that there is a significant relationship between Psychological contracting , Entrepreneurial competencies the SME performance. This confirms with the results that were tested for the multiple regressions of Psychological contracting components, entrepreneurial competencies and SME performance; however, we can hardly consider the psychological contracting and entrepreneurial competencies are variables with a high predictive variable by itself due to the relatively small value of the r-square. The coefficient of Psychological contracting is significant, as the T value is 3.642 and p-value is less than 5% (.000) and it has a value of (.228), and the coefficient of Entrepreneurial competencies is significant, as the T value is 3.607 and p-value is less than 5% (.000) and it has a value of (.303), however, the constant of the equation is significant as the T value equal to 1.324 and its p-value is higher than 5% (.187) The low value of the R square can be attributed to the fact that international outsourcing relationship include more than one party both the supplier and the client side. Also, there are many other variables such as environment that can affect the SME performance which can add to the predictability of the model. As it is clear from the results of the above regressions, that after the addition of psychological contracting to the relationship between entrepreneurial competencies and SME performance, the significance of the

entrepreneurial competencies remained after the addition of Psychological contracting which prove that Psychological contracting is having a partial mediation between entrepreneurial competencies and SME performance. The researcher deducts from that the psychological contracting is important but still it is only partially replacing the entrepreneurial competencies and still it has a significant effect on SME performance.

6. Conclusion

As of the above findings, there is a significant relationship between entrepreneurial competencies and Psychological contracting of Outsourcing. The most important of those competencies was the relationship building and the conceptual competencies for the Psychological contracting. There is a significant relationship between Psychological contracting and SME Performance. Psychological contracting acts as a mediator for the relationship between entrepreneurial competencies and SME performance.

7. Research limitations and further research

This research is conducted on two governess in Egypt, and during research, there has been a sudden shutdown in the number of companies in IT industry, which affected massively lots of the results, and led to loss of many outsourcing opportunities. In addition, many other macro-environmental changes did occur during the field study, which can affect the relationship strength among variables. Another research, could be conducted after macroeconomic stabilization to identify the effect of such Macro-environmental factors on outsourcing relationships.

8. References

Bolton, J.E. (1971). 'Report of the Committee of Enquiry on small firms'. *Bolton Report Cmnd*. 4811. London: HMSO.

Watson, J. Everett, J. (1993), 'Defining Small Business Failure', *International Small Business Journal*, Vol.11, No.3, pp. 35-48.

Hughes, Cosh, A. and Weeks M. (2000), 'The Relationship between Training and Employment, Growth in Small and Medium-sized Enterprises', *Centre for Business Research and Dept of Applied Economics*, University of Cambridge.

Campell, K. (2003), *Smarter Ventures: a survivor's guide to venture capital through the new cycle,* London: FT-Prentice hall.

Mccloy, U.A., Campbell, J. P. and Cudeck, R. (1994), 'A confirmatory test of a model of Performance. Determinants', *Journal of Applied Psychology*, Vol. 79, pp. 493 – 503.

Baum, J.R. and Locke, E.A. (2004), 'The relationship of entrepreneurial traits, skills and motivation to subsequent venture growth', *Journal of Applied Psychology*, Vol. 83, No.4, pp.587-89.

Man T., Lau, C. and Chan, T. (2002) the competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies, *Journal of Business Venturing*, Vol. 17, and No.2. pp. 123–142

Gottschalk, P., and Solli-Sæther, H. (2006),'Maturity model for IT outsourcing relationships', *Industrial Management & Data Systems*, Vol. 106, No.2 . pp. 200 – 212.

Christine, K. Soon, Ang., and Detmar W, S. (2004), 'IT Outsourcing Success: A Psychological Contract Perspective Information Systems Research', *Information Systems Research*, Vol 15, No. 4, pp. 356–373.

Hudson, M., Smart, A., and Bourne, M. (2001),'Theory and practice in SME: performance measurement systems', *International Journal of Operations & Production Management*, Vol. 21, No.8, pp. 1096-1115.

Kim, R, D. Cheon, J, M. Beugré, D, C. and Coverdale, K, T. (2003) 'Information Systems Outsourcing: Exploration on the impact of Outsourcing service Providers' service quality'. *IACIS 2003*, p. 143 – 148.

Lu, Jane, W. and Beamish, Paul, W. (2001), 'The internationalization and performance of SMEs', *Strategic Management Journal*, Vol. 22, No.6-7, pp. 565–586.