A Comparative Study of Antecedents to Contracting Practice in Buyer-Seller Relationships in Egypt and China

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ABSTRACT
The purpose of this study is to analyze the influences of transaction factors on inter-firms relationships in different businesses. The study focuses on the comparison between the Chinese and Egyptian business with regarding to buyer and seller relationships in textile industry in order to find out the differences in buyer-seller relationships between Egypt and China and how the cultural factors influence the contracting practice between these two countries. Therefore, transaction cost analysis (TCA), relational contracting theory (RCT) and resource dependence theory (RDT) would act as the important tools to find out how the business relationship works in different culture background. Combining the three theories, we can conclude the general view about the transaction mechanism in the two countries. Chinese market situation, weak legal system and informal institutions combining with the "guanxi" embedded business environment make the Chinese small firms rely on the relational contracting more than formal contracting. Meanwhile, the high value for law makes Egyptians prefer to formal contracting. The findings highlight the fact that the level of contracting mechanism was found to be more positive in Egypt than in China and was

statistically significant. In other words, the Egyptians tend to use the formal transactional mechanisms which emphasize legal conditions and incentive systems, whereas the Chinese prefer the relational mechanisms that govern exchanges through moral control and trust in the relationships between the buyers and suppliers. A hierarchical multiple regression approach employing the OLS regression model was carried out and the findings show that almost 30% of contracting mechanisms can be explained by the model, while the remaining percentage (70%) can be explained by other factors not included in the research model. In addition, the findings revealed that the association between supplier specific investments and contracting becomes significantly more enforced in Egypt than in China when the size of the buying firm increases. Furthermore, contracts have a control effect on buyer-supplier relationships in case of unanticipated eventualities.

Keywords: Buyer and supplier/seller relationships, textile industry, China, Egypt, transaction cost analysis, relational contracting theory, resource dependence theory, and culture dimensions theory.

INTRODUCTION

The textile industry has made significant contributions to industrial development in the history of human beings. The rise and development of textile industry liberated mankind from hunger and cold, refined human spirit and raised civilization, plays an irreplaceable role in the prosperity of global economy and greatly pushes the development of productivity technology. Textile is not only used in the clothing we wear, but it also influences the interior and exterior decoration and significantly changes the appearance of our living spaces. Furthermore, it is also utilized as high-tech materials in sports, leisure, aircraft, automotive, computer, civil construction, engineering, medicine and etc. In general, textile industry has improved the living conditions of the world while supplying new styles of life and culture for human in the world.

China has a huge textile industry and its market plays an important role in the world textile trading business. In 2016, despite global economic depression and the low level of market demand, the Chinese textile industry achieved steady growth throughout last year. It focused on the further transformation and upgrading, actively implementing structural reforms, stable profitability as well as the continuous improvement of operational quality. However, the cost burden of enterprises is still heavy and the industry is facing greater pressure for developing [1].

According to the data from National Bureau of Statistics, for the year of 2016, the textile industry above-scale enterprises industrial added value increased by 4.9%, lower than the same period last year by growth rate of 1.4 percentage points. It achieved business income of 1,062.8 billion US dollars, with an increase of 4.1% from previous year. The total profit is 58 billion US dollars, with an increase of 4.5%, the growth rate slowed 0.9 percentage points over the same period last year; fixed assets investment is 1861.36 billion US$, with an increase of 7.8%, the growth rate compared to the same period of last year decreased by 7.2 percentage points. Besides, the annual exports of textiles and clothing is 271.02 billion US dollars, fell 7.2% year-on-year, down by 2.4 percentage points over the same period last year. The profit margin of textile enterprises above designated size was 5.5%, the total asset turnover was 1.6 times / year, which was comparable with the same period last year [2].

On the other side, the Egyptian textile industry is the third contributor to the GDP and a major foreign exchange earner in the Egyptian economy [3]. According to the United Nations Economic Commission for Africa [4], Egypt is home to the only fully vertically integrated textiles industry in the Middle East and Africa, starting from the cultivation of cotton up to finished products which assured buyers of short lead times.

However, over the last 30 years, the Egyptian textile industry has been in decline and faced serious problems as: lack of renovation, limited skilled labor, high input prices, and high tax and finance costs [5]. Moreover, the exports of the Egyptian textile and clothing fell from 3.437 million US$ in 2011 to 2.758 million US$ in 2015, which was resulting from the decline in exports of raw cotton, synthetic fibers, cotton yarn and cotton textiles to most foreign markets. In contrast, the imports of the textile and clothing have been increased to 4.221 million US$ in 2015 from 2.492 million US$ in 2011, representing 6% of the total volume of imports in the country. Also, according The Egyptian Center for Economic Studies [6] and Textile Outlook International (TOI) [7], Egypt was producing 12 million quintals of cotton/year and now produces only 2 million quintals/year.

This research focuses on the textile industry in eastern Egypt and China related to the cultural perspective. The purpose of thesis is to study the framework of buyer-seller relationships in fabric producers under textile industry in China and Egypt, and to find out the culture differences influencing the contracting practice between the buyer and supplier. This paper will be conducted as a comparison study between China and Egypt in textile industry.

THEORATICAL BACKGROUND

The main idea of transaction cost analysis (TCA) is to minimize the transaction cost between business partners. According to the transaction cost analysis, there is an important assumption regarding to the governance modes within business, the organization of specific governance structures can economize the transaction cost better than others [8]. Relational contracting theory (RCT) focuses on influences of the history on the business relationship, in which the opportunism can be minimized by the relational norms and trust, the buyer and seller relationship will be organized and safeguarded, therefore the ex-ante and ex-post transaction costs are reduced [9-11]. Relational contracting theory is used as the supplement and extension for transaction cost analysis for a long time. One of the main reasons is the weakness of transaction cost approach, which is the lack of time in the discussion of the business relationship [12].

Transaction cost analysis and relational contracting theory were integrated by Heide and John [11], it indicates that there is limitation to the transaction cost framework. Transaction cost theory only considers the governance between the firms in the relationship with certain assumptions. These assumptions based on Williamson [13] may confine general framework of transaction cost analysis. Relational norms are the conditions, based on it, there is the positive effect of the specific assets on the safeguard.

Resource Dependence Theory (RDT) expresses the core idea that all organizations rely on resources within their environment. Organizations have to depend on each other for exchange and survival [14]. However, internal self-sufficiency with resources is almost impossible for organizations due to the uncertainty of the market environment. Organizations need to restructure their exchange relationship by building formal or semiformal links with others in order to reduce the uncertainty and manage the dependence [15].

The basic assumptions in resource dependence theory is to ensure the survival of organization [16]. Because of environmental uncertainty and lacking of sufficient resources, organizations may pursue more resources in order to protect their own interests, as well as reduce and avoid the impact of environmental changes [16]. The choice and accumulation of resources is a function of internal decision-making and external strategic factors. It is also consisting the basic premise in RDT, when the organizations face the external uncertainty, it will establish the inter-organizational arrangements as strategic response to environmental uncertainty and

inter-firm dependence [17], such arrangements include joint ventures contracting and mergers [15, 17, 18].

Research model

The model in figure 1 illustrates the relationship between the dependent variables, which is formal contracting, and independent variables, which are; specific investments and environmental uncertainty. Formal contracting is explained as the contracts with legal enforcements in this study [19]. Geographical location (dummy variable) defines the culture differences present between China and Egypt in the textile industry. As the dummy variable, "0" refers to the Chinese buyer and "1" refers to the Egyptian buyer.

Two control variables are included in this model: buyer specific investments and relationship duration. The amount of buyer specific investment and the length of relationship have the potential influence on contracting. Relationship duration refers to the time length of the exchange relationship between the textile producer and manufacturer, which is measured by the number of years both sides have been involved in the exchange relationship. Buyer specific investment refers to the investment from the manufacturer, which is measured by using seven-point liker scale.

Figure 1: Research Model
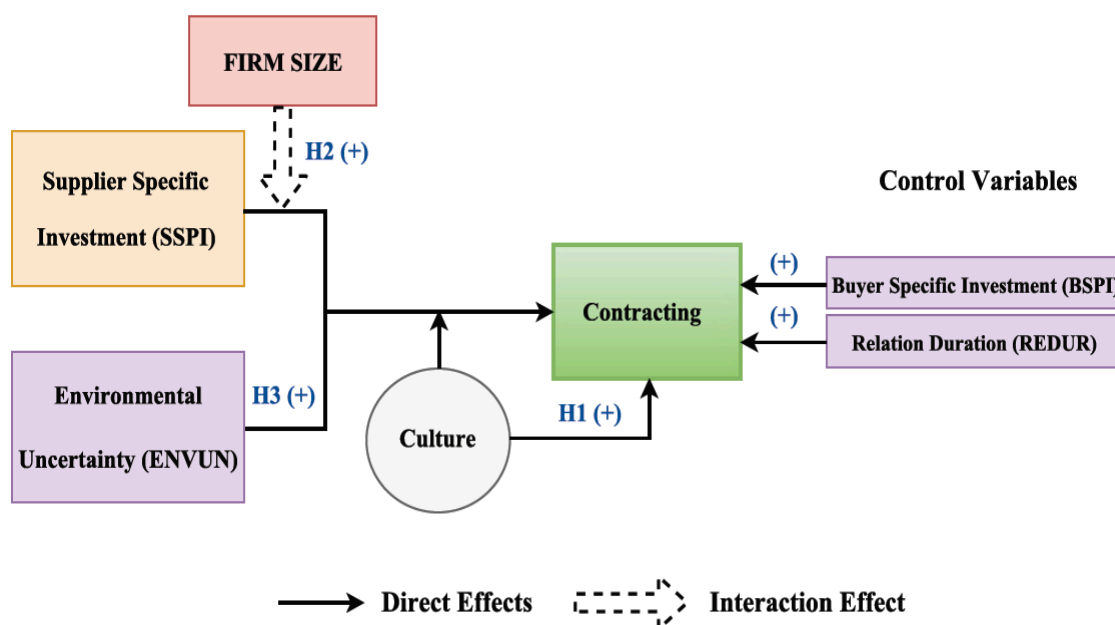
RESEARCH METHODOLOGY

The study has applied the mixed methods approach to benefit the strengths of both qualitative and quantitative approaches [20]. Quantitative aspects have been used to examine the relationship among the independent variables and dependent variable, as well as few qualitative aspects were adopted to understand the cultural issues and business environment aspects within the Egyptian market and Chinese market. Semi-structure interviews through the telephone and face-to-face have been conducted to obtain the qualitative aspects, while the quantitative data were gained by using a questionnaire with close ended questions. Hypothesis development

The research hypotheses were formulated based on interplay between the cultural differences and determined factors on buyer-seller relationship, as the following:

The Association Between Culture and Contracting

According to Meryem [21], governance is "a multidimensional phenomenon which encompasses the initiation, termination, and ongoing relationship maintenance between a set of parties". When the concept of contact is considered as governance mechanism, it becomes the tool used to arrange any exchange relationship, the relationship between buyers and suppliers need to rely on formal contracting or relational contracting governance. Formal contracting emphasizes on legal enforcement and incentive systems. On the other hand, relational contracting governs business exchanges through relational norms and trust. Therefore, in this study, we define contracting as formal governance mechanism.

According to the previous studies such as by Umar [22] and Buvik and Andersen [23], in order to verify the influence of culture characteristics on business relationship, dummy variables are used in their researches. Anderson and Gatignon [24] indicated that culture and geographical distance make performance measurement difficult in business relationship. Thus, in this paper, culture difference is measured by the dummy variable, which represents the geographical location of the two countries as China and Egypt.

As the different geographical location, culture has a great impact on the contracting governance. This has been proved by a number of former researches, for instance, Nisbett [25] elaborated that in Western countries, the formal legal governance is preferred in managing the business relationships, while on the contrary, Asian countries tend to rely on the relational governance when deal with exchange partners. Furthermore, the influence of culture on the business relationship even distinguishes at different location in Asia. For example, China and Japan, both of them share the high-context culture, but Japanese culture is more contextual than Chinese culture. Moreover, Japan has a higher tacit and more group-centered culture, while China is more explicit and with more individualism. The above differences contribute to the differentiations in Japanese and Chinese business [26].

In Chinese culture, one of the main characteristics in business relationship derived from Confucian philosophy is "Guanxi," this can be defined as the personal connections. With the respect of contracting, "guanxi" within buyer and supplier relationship can be implied as an implicit psychological contract, in which, the transaction behaviors need to be abided by the related relational norms (e.g. trust, commitment, obligation and etc.) [27]. Chinese society is affected deeply by the harmony in Confucian philosophy, the moral rules as the personal relationship as "guanxi" gradually become the dominant governance with resources exchange in Chinese business [28]. China prefers the guanxi-based business connections, and it seems to be the lifeblood of the Chinese business community, people prefer to rely on the contacts of personal connections and loyalties rather than the impartial justice as organizational affiliations or legal standards [29].

From cultural perspective, Egyptians sees doing business as synonymous with making deals with formal communication in written contracts and the idea of a covenant is fundamental to the culture [30]. Foster [31] pointed out that, Egyptians believe that agreements are reached through a logical framework and based on legal and official system. Furthermore, Egyptian society is characterized by high uncertainty avoidance and short-term oriented [32]. Hence, formal governance and contracts clearly specifies the obligations rights of each party and how to face future situations. I.e. contracts make the relationship between the parties explicit and

clear. Thus, Egyptians buyers and suppliers can avoid uncertainty through behavioral boundaries and legal forces [21].

From the business side, Egyptian businesspeople are shrewd negotiators and the negotiations take slow and protracted pace to reach an agreement. They often use some deceptive techniques and asymmetric information, where information is rarely shared freely, because they believe that privileged information creates bargaining advantages in order to obtain concessions [33]. Radwan [34] noted that, decision making and signing a contract in the Egyptian market usually begin with a long series of negotiations that culminates by careful drafting of the contract. Moreover, the commitment of buyer and supplier by the contract terms is one of the most important criteria for evaluating each other and establishing their reputation.

Therefore, it is logical to assume that the main governance in China is relational contracting mechanism, which we consider it is at the lower level of contracting. For Egypt, it is formal contracting governance mechanism, which we consider as higher level of contracting.

Based on the above argument, the hypothesis can be proposed as the following:
H1: The level of contracting is significantly higher in Egypt than in China.

Association Between Supplier Specific Investments, Firm Size and Contracting

Specific investment or asset specificity is defined by Williamson [13] as "durable investments that are undertaken in support of particular transactions, the opportunity cost of which investments is much lower in best alternative uses or by alternative users should the original transaction be prematurely terminated". In which, he also indicated that there is a mutual interest in perfecting the contracting for the asset-specific exchange. In other word, TCA theory suggests that formal contracting should be taken as the safeguard for specific investment when it becomes substantial. Joskow [35] interpreted that specific investment may increase the use of formal contracts. However, the relational contracting theory holds the view that relational norms as well as trust are able to safeguard the exchange hazards such as opportunism leaded by specific investment. In general, this study can assume that the higher specific investment contributes to the need of higher level of contracting.

Firm size has been taken as the control variable in most researches. In this paper, the investigated firms are limited to small and private firms. Due to the large number of small textile firms under different conditions between two countries, the different size of small firms are measured in this study. Abdulai [36] found that interaction between specific investments and firm size influence on the choice and design in contracts between producers and the processing firms. According to the resource dependence theory, then the specific investment made by small firms related to the large party, the dependence generated [37]. This argument has been discussed by Porter [38], whose core assumption is that buyer's bargaining power is influenced by the relative size of the parties. When the purchase volume of buyer increases, the importance of buyer to supplier increases. Bragelien [39] put forward that size has the impact on dealing with relationship-specificity, especially with respect to writing contracts, safeguarding them, and settling disputes. Moon and Phillips [40] confirmed that purchase contract decisions vary strongly with firm size. The association between contract intensity and firm size were also tested in their research, the result is that firms which prefer to use contracts are usually larger firms. Therefore, it is reasonable to assume that firm size has the positive association with contracting.

Zhou and Poppo [41] pointed the formal contracts in not widely used in small firms exchange in China, instead, a social institution as relational governance have been generally applied well between the small-size of transactions. When it comes to the medium and big firms in China, usage of formal contracting becomes the majority. Specific investment is acted more as the commitment in relationship, which motivates the trust and long-term relationship building [42]. Geyskens, Steenkamp [43] states that many studies confirmed the incorporation of relational governance, especially when asset specificity grows relational governance is rather preferred than market governance. However, Egypt always has high intention to avoid the uncertainty and safeguard the specific investment by strict law and regulation. Therefore, when supplier specific investment increases, the contracting enforced by Egypt would still at the higher level than by China.

Based on above reasons, the following hypothesis is proposed as:
H2: When the size of the buying firm increases, the association between supplier specific investments and contracting becomes significantly more enforced in Egypt than in China.

The Association Between Environmental Uncertainty and Contracting
Environmental uncertainty concept focuses on market turbulence. It is divided into two types, one is the external uncertainty, this kind of uncertainty contains the economic background, government policy, technological and volume changes etc. The other is the internal uncertainty, which is related to the production, sales and material. [44].

Environmental Uncertainty Has The Positive Effect On Opportunism:
Opportunism is the factor that links between environmental uncertainty and contracting. According to TCA, uncertain environment is related to the adaptation issues, combined with bounded rationality, making contracts cannot cover all the unexpected contingencies in exchange relationship. Hence, it would increase the potential of opportunistic behavior by exchange partners by allowing information asymmetries to develop between the buyer and the supplier [45]. Thus, higher environmental uncertainty leads to the higher level of opportunistic behavior [46]. There are a number of empirical researches have studied and confirmed this argument that there is the positive association between environmental uncertainty and opportunism in business. In the context of emerging economy, Luo [29] confirmed that environmental uncertainty, particularly in the aspects of information verifiability and law enforceability, leads to increasing the opportunistic behavior. In terms of market turbulence, Mysen, Svensson [47]'s finding was consistent and extended with Williamson [13]'s transaction cost theory, in which, he argued that when market condition changes so fast and unforeseeable, the manufacturers feel challenged in changing the perception of supply and demand accurately. At this time, negative information asymmetry develops, which could entice suppliers' opportunistic behavior. Skarmeas, Katsikeas [48] focused on the international buyer and supplier relationship, they found because of the environmental volatility, importers are not able to forecast the demand and market changes, and the exporters can interpret the ambiguous contingencies in their own favor, which encourage overseas suppliers to engage in opportunistic behavior and vice versa. It has been proved that the more environmental volatility causes the more opportunism. The above studied has further validated the theory of TCA, which is, in general, that greater environmental uncertainty leads to the greater opportunism.

The Greater The Environmental Uncertainty Contributes To The Higher Level of Contracting:
Due to the other party's opportunistic behavior, the problem of safeguarding emerges for its partner. Gurcaylilar-Yenidogan and Windsperger [49] found that formal contracts could

improve relationship performance by decreasing the risk of opportunism and adaptation problems under high environmental uncertainty. Therefore, according to Daft, Murphy [50], formal contracting is able to deal with the problems associated to the environmental uncertainty via legal terms. For instance, in order to handle the situation of unstable demand, contracts could provide the security through specified amounts and prices. They pointed out that through the specific agreements of obligations and responsibilities, formal contracts would act as the safeguard to deal with the environmental uncertainty. From the above we can tell that when the environmental uncertainty rises, the formal contracting increases as well.

Formal Governance in Egypt

Egyptian markets are characterizes by a high level of instability and uncertain environment. In addition, according to the culture dimension by Hofstede, with the dimension of Uncertainty Avoidance, Egypt is remarked for a score of 80. Such high scores indicate that Egyptian people feel a great level of threatening and intolerance by ambiguous and unknown situations. In order to avoid this kind of uncertainty, they value the rigid codes, rules as well as related norms to achieve the security.

Although the preference of avoiding uncertainty is at a high level in Egyptian culture, it is difficult to conduct the formal activities to reduce the uncertainty within business in real situation. As Elbanna and Alhwarai [51] stated that despite improving the Egyptian economic conditions it still faces a number of difficulties such as poor governmental policies and corruption. Moreover, according to EU's Country Strategy Paper in Egypt [52], the manufacturing performance has been constrained by the persistent weaknesses in the business environment. For example, due to the weaknesses inherent in the institutions regulating the economy, Egypt is not capable of enforcing new economic legislation effectively. Especially for the private sectors, they are facing the uncertain commercial law system, in this business environment, the level of transparency and competition is relatively low. Furthermore, the enforcement of contracts in business is far from enough and satisfactory. For Egypt, improving corporate governance is another important challenge to develop business relationship.

In summary, although Egyptians prefer to avoid uncertainty by contracting in business, it is hard for them to maximize this goal through formal procedures due to the legal weaknesses in business environment.

Relational Governance and Contracting in China

In China, generally, in order to provide the security when confronting environmental turbulence, the exchange partners prefer to use trust and personal relationship as the safeguards [53, 54]. Hofstede's dimension results showed a very low level of Uncertainty Avoidance for China, which indicates the high level of acceptance of ambiguity and unknown, and Chinese people are comfortable and good with the uncertainty.

However, Chinese business environment is much more complicated than Egyptian's, one of the major reasons is that relational governance prevails in Chinese business relationship. There are different arguments with regard to the modes of mechanism governance. Among the arguments, the main topic is the relationship between relational governance and transactional mechanism (or formal contracts) e.g.[55-57].

The Way That Relational Norms Enforce The Contracting in China

Due to the relative weaker legal institutions (compared to developed countries) of China, along with its emerging markets, the detailed contracts alone are not effective enough in reducing opportunism. The institutional structure in China is not stable enough for the enforcement of contracts, instead, particularism and personal accommodation are the dominant drivers for law enforcement [58]. In the situation of absent strong legal enforceability, exchange partners prefer to depend on the relational mechanisms to assure the business is developed and maintained in good order. By means of relational governance, with establishing relational norms, exchange partners are able to evolve the shared identity so they can find the strong motivation to abide by the normative practice [59]. Under the relational governance, social obligations generated, which contributes to forcing the exchange parties to respect and honor the content of the formal contracts. In China, there are seriously punitive consequences of breaching the relational norms, such as losing reputation and being rejected by other potential partners. What is worse, the violator would be expelled from this network or industry [60]. According to the TCA, opportunism is derived from human nature, and the reason for building specific contracts is to reduce the opportunism. The assumption of TCA above is not consistent with Chinese culture to some extent, particularly in the aspects of guanxi and mianzi, which makes Chinese highly value the prestige, honor and reputation when develop and maintain the business relationship [61]. From the Chinese perspective, contractual terms in detail may imply the distrust to the exchange partner [62]. Thus, the negotiation of drafting a contract may cause harm to the upcoming business relationship. However, with the strong relational norms between buyers and suppliers, both of them are more willing to highly accept and respect to contracting, since with the foundation of relational norm, now the contract refers to a sign of commitment [58]. Therefore, the function of relational governance is to act as an agent for legal institutions to enforce contract implementation.

Relational Governance Imposes The Contracts Especially When Environmental Uncertainty Increases:

Zhou and Xu [63] found that relational governance complements detailed contracts in curbing opportunism in Chinese market. Moreover, the research also indicated that under Chinese business environment, if the relational assurance is absent, the business would become worse as the detailed contracts not only fail to reduce the opportunism but also cultivate this behavior. Relational governance works as the liability for formal contracting in Chinese market. This view is consistent with the work of Zhou and Poppo [41], in which the relationship between relational governance and contracts are complementary. The purpose of operating relational governance is to bring the assurance for enforcing the contracts so it can help build a framework for adaptation. This also suggests that it is the contract that governs the market exchanges. The results of this research also proved that, under Chinese context, when relational governance increases in business relationship, there is no evidence that formal contracts would be abandoned nor weakened. On the contrary, the levels of relational governance become higher when the uncertainty increases which in turn leads to the greater contract customization. A coherent finding by their further study in [64] showed the direct and positive association between customization of contracts and uncertainty in Chinese market. To sum up, whether managers prefer more detailed contracts or customized contracts when facing greater environmental uncertainty, the purpose is to increase the contractual complexity so it can mitigate opportunistic behavior [57].

In general, Chinese businesses employ both relational networks and more formal contracts of firm control [65]. Relational governance provides the assurance and enforces the implementation of formal contracts (specially the detailed and customized contracts) when the environmental uncertainty increases. Therefore, notwithstanding that there are the

weaknesses in legal institutions for both countries, compared to Egypt, which only relies on the uncertain and unsatisfactory legal systems, China apparently has the more effective and powerful tool as relational governance to impose on contracting when environmental uncertainty increases (see Figure. 2).

Figure 2: The Association Between Environmental Uncertainty and Contracting in China and Egypt
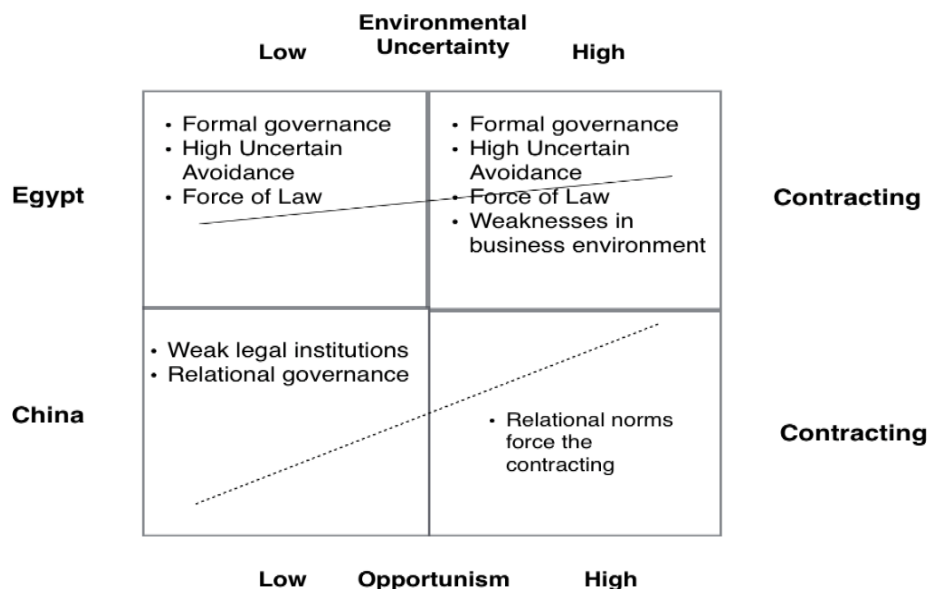
Resulting from the above, it can be proposed logically:

H3: The effect of environmental uncertainty on contracting is significantly more positive in China than in Egypt.

Data Collection Methods
In the initial stages of the study, a preliminary semi-structured interview had been conducted by telephone to determine the variables that were relevant to study. In addition to some semi-structured face-to-face interviews with a few general and purchasing managers in the Egyptian and Chinese textile and clothing companies. The purpose behind these interviews was to understand and gain practical insight about buyer-supplier relationship and the way of doing the businesses within the Egyptian and Chinese markets. In addition to obtain more insight about the cultural and businesses environment aspects. Such interviews gave the researchers more information about the factors that affect in contracting governance between buyer and supplier, especially in case of presence some levels of investments and uncertainty in the market. Furthermore, such discussions helped the researchers to develop question items that reflect the current practices in the industry.

On the other hand, the researchers developed a questionnaire [66] to gather the quantitative data using cross-sectional survey. In which, this study adopted the structured questionnaire with closed ended questions to obtain the quantitative data from Egypt and the eastern part of China, which includes the provinces of Shanghai, Jiangsu and Zhejiang.

Population and Sampling
The target population in this study was the manufacturers sector only under the textile industry in both countries. However, sampling method in the study involved all registered and licensed clothing manufacturers sector within Eastern China and Egypt, in particular, Cairo city

where majority of these companies are located and some of them have branches in other cities in Egypt [67]. Furthermore, the study was adopted the convenience non-random sampling technique to collect the data. Despite the fact that every company of the clothing manufacturers sector in Eastern China and Egypt had the same probability to be included in this representative sample, but data was not easily available about such companies in Egypt and China [68]. Hence, only some of the registered and licensed clothing producers were available and easily accessible, and they were considered in the sample under study, but other manufacturers were not easily accessible. Determining sample size requirements for structural equation model (SEM) is a very big challenge for investigators [69]. Despite this, Wolf, Harrington [69] have recommended several examples for rules-of-thumb, one of them for Nunnally [70], who suggested a sample size of 10 observations per variable. Since this study includes seven variables or constructs, thus, the minimum of the random sample size is 7 x 10 = 70 based on the rule-of-thumb of Nunnally [70].

DATA ANALYSIS

Scale Reliability
The researchers measured the internal consistency for all the variables used in this study by using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) techniques, and all the Cronbach's α coefficient values exceed 0.7, see Table 1. This indicates that there is high degree of internal consistency between variables, and therefore, high level of reliability [71].

Table 1: Construct Reliability Scores

Construct	Items	No. of Items	Cronbach's alpha (α)	Composite Reliability (CR)*
CONT	CONT 1-7	7	.92	0.967
SSPI	SSPI 1-7	7	.94	0.970
ENVUN	ENVUN 1-4	4	.90	0.914
BSPI	BSPI 1-7	7	.93	0.965

*. (Sum of standardized factor loadings)^2 / [(Sum of standardized factor loadings)^2 + (Sum of indicator measurement error)]. Indicator measurement error can be calculated as 1-(standardized loading)^2, i.e. CR = $(\sum \lambda_i)^2$ / $[(\sum \lambda_i)^2 + \sum (1 - \lambda_i^2)]$.

Construct Validity
Construct validity focuses on the hypothesis testing of theoretical concepts and the validity of empirical measures [72]. Therefore, the researchers studied many perspectives and literature reviews to develop the questionnaire, provide the theoretical evidences and demonstrate the construct validity in this study. Also, they took into consideration the views of the experts and stakeholders in the field about the construct of the instrument measure (questionnaire) used to collect the data and the extent to which this questionnaire is consistent [72, 73].

Discriminant Validity
The researchers conducted the exploratory factor analysis with Varimax rotation, the most commonly used orthogonal rotation in SPSS, in order to measure both discriminant and convergent validity in this study [74, 75]. Pallant [76] saw that, to consider that the data have a good validity, the factor analysis test (Bartlett's test of sphericity) should be significant i.e. $p < 0.05$ and the Kaiser-Meyer-Olkin (KMO) "which measure of sampling adequacy" should be at the minimum value of 0.6. Thus, the EFA revealed sufficient evidence for discriminant validity where all the factor loadings above 0.50 the recommended threshold by Hair, Black [77], which means that the factor loading for one construct is higher than the factor loadings of the other constructs. The result of EFA showed that the four-factor solution whose factor loadings range between 0.755 and 0.895. Moreover, the KMO delineation value was 0.87 which indicates that common factors could describe inter-firm correlation as well as the Bartlett's sphericity is

highly significant (Bartlett's test: 3014; $p < 0.01$) in this study i.e. Chi-square value of 3014 at the degree of freedom 300, as shown in Table 2.

Table 2: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.873
Bartlett's Test of Sphericity:	Approx. Chi-Square	3014.134
	df	300
	Sig.	.000

The researchers also ran factor analysis in SPSS 22 to obtain the AVE. Then they calculated the square roots of AVE to measure the discriminant validity. All AVE values were higher than the correlations between constructs or variables under study, as shown in Table 3. The AVE of this study ranges from 0.63 to 0.85 for CONT, SSPI, ENVUN and BSPI, which found to be greater than the correlations involving the variables or constructs [78].

Table 3: Discriminant Validity; Inter-Construct Correlation (r) and Square Roots of Average Variance Extracted (AVE)

Variables	1	2	3	4	5	6	7	8	9	10	11	12
					Correlations***							
1. CONT	1	-.02	.17	.11	.18*	.43**	.42**	.26**	.42**	.28**	.04	.12
2. SSPI		1	-.13	.31**	.15	-.46**	-.17*	-.21*	-.20*	-.08	.40**	-.12
3. FIRMSIZE			1	.06	.90**	.18*	.18*	.82**	.25**	.78**	.08	.43**
4. ENVEN				1	.19*	-.32**	-.067	-.047	.033	.076	.26**	.036
5. SSPI X FIRMSIZE					1	.08	.17*	.69**	.24**	.75**	.22**	.41**
6. NATIONALITY (Egypt/China)						1	.89**	.49**	.88**	.45**	-.21*	.05
7. NAT X SSPI							1	.45**	.95**	.52**	-.00	.02
8. NAT X FIRMSIZE								1	.51**	.94**	-.02	.06
9. NAT X ENVEN									1	.57**	.08	.04
10. NAT X SSPI X FIRMSIZE										1	.09	.03
11. BSPI											1	.02
12. REDUR												1
√AVE****	.64	.65	--	.85	--	--	--	--	--	--	.63	--

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

***. For $n = 140$.

****. The level of square roots of AVE: CONT = 0.410, SSPI = 0.419, ENVEN = 0.727, and BSPI = 0.400.

Furthermore, it was also necessary for the researchers to run the confirmatory factor analysis (CFA) in AMOS 22 to compute the AVE from standardized factor loadings and compare the AVE with inter-item squared correlations and all the AVE values were found to be higher than the squared multiple correlations among the different constructs in each case. This accentuates proof for discriminant validity in this study in line with [Fornell and Larcker [78], Suhr [79]].

Convergent Validity
The researchers assessed the convergent validity by using the Eigenvalues extracted from the EFA. The Eigenvalues for all factors/ constructs were; 7.98 for supplier specific investments (SSPI), 4.95 for buyer specific investments (BSPI), 3.29 for contracting (CONT) and 2.41 for environmental uncertainty (ENVUN), and all of them exceed the recommended threshold value

of 1.0 [77, 80]. Also, the researchers assessed the convergent validity using SPSS 22 and the outputs detected that the AVE values ranging between 68% and 77% surpassing the recommended 50% or greater criterion threshold by Hair, Black [77], where CONT was 68.11%, SSPI was 75.25%, ENVUN was 77.08% and 71.28% for BSPI. Thus, this provides a strong evidence of convergent validity for all the constructs under study.

Moreover, Jöreskog [81] stressed that, to assess convergent validity in a structural equation modelling it is common to use confirmatory factor analysis (CFA). Therefore, CFA has been run using AMOS 22 to measure the convergent validity in this study. The outputs of the CFA reveal that all factor loadings of observed variables for each latent construct are significant and surpassed the criterion limit of 0.5 [82], with t-values are > 2 [77, 80]. Furthermore, the composite reliability (CR) for the constructs in this study all are greater than 0.60 the recommended criterion threshold [77, 83]. Thus, this strongly confirms convergent validity in the study.

ASSESSMENT OF THE HYPOTHESIZED MEASUREMENT MODEL
The researchers have performed the confirmatory factor analysis (CFA) using AMOS 22 to estimate how well the hypothesized model fits the data and ensure unidimensionality [84]. The CFA outputs proved adequate fit of the model to the data, whereby all standardized loadings were quite significant at $p < 0.01$. Moreover, all the parameters resulted as expected regarding their associations and sign. The overall model fits and meets the acceptable threshold criteria considering various fit statistics. Although the significance of Chi-square statistic (Chi-square = 658 at degrees of freedom = 269 and $p = 0.000$), which indicates problems with the fit, but this significant p-value resulting from the sensitivity of Chi-square to sample size [77, 85]. In addition to, the normed Chi-square ratio (CMIN/DF) give a ratio of 2.4:1 which below the acceptable criterion threshold of 3:1 by [Hair, Black [77], Ullman [84]]. Furthermore, other fit indices such as; comparative fit index (CFI) and incremental fit index (IFI) provide 0.867 and 0.868 respectively, fulfilling the minimum threshold of 0.85 [86] and very close to 0.90 [77]. Also, the root mean square residual error of approximation (RMSEA) value was 0.1 equal to the recommended criterion 0.1 [87]. Respecting the above statistics, we can conclude that the model robustly fits with the hypothesized model and supports the further analysis of the conceptualized theoretical relationships.

HYPOTHESES TESTS AND EMPIRICAL FINDINGS
To obtain the statistical coefficients that use to estimate the regression model and test the hypotheses (see table 5) in the study, the researchers have examined three separate regression models. The first model represents the entire sample and includes all the variables and interaction terms. Then they deducted from this complete model two models; one for the Egyptian market and the other for Chinese market, as we can see in Table 4, to be easier to compare between the buyer-supplier relationships within the two countries.

Table 4: Regression Analysis: Entire Sample, Egyptian and Chinese Buyer-Supplier Relationships (Dependent Variable: Contracting)

Variables[a]	a) Entire Sample (n^c = 140)			b) Egyptian Relationships (n = 70)			c) Chinese Relationships (n = 70)		
	Coefficients B	t-Value	p	Coefficients B	t-Value	p	Coefficients B	t-Value	p
Constant (b_0)	3.640	7.808	<.01	5.242	13.61	<.01	3.706	4.545	<.01
SSPI (b_1)	.242	2.996	<.01	.040	.513	n.s.	.240	2.179	<.05
FIRMSIZE (b_2)	-.088	-.522	n.s.[b]	.170	2.800	<.01	-.060	-.212	n.s.
ENVEN (b_3)	.326	3.936	<.01	-.029	-.459	n.s.	.330	2.888	<.01
SSPI x FIRMSIZE (b_4)	-.151	-1.956	<.05	.184	3.821	<.01	-.152	-1.438	n.s.
NAT (b_5)	1.454	6.722	<.01	--	--	--	--	--	--
NAT x SSPI (b_6)	-.233	-1.241	n.s.	--	--	--	--	--	--
NAT x FIRMSIZE (b_7)	.247	1.093	n.s.	--	--	--	--	--	--
NAT x ENVEN (b_8)	-.373	-2.253	<.05	--	--	--	--	--	--
NAT x SSPI x FIRMSIZE (b_9)	.319	2.341	<.05	--	--	--	--	--	--
BSPI (b_{10})	.114	1.709	n.s.	.049	.565	n.s.	.121	1.259	n.s.
REDUR (b_{11})	.334	1.461	n.s.	.395	3.086	<.01	.273	.609	n.s.
Model Fit	$F (11,128) = 6.309$, $p < .01$, $R^2_{Adj} = .296$, $R^2 = .35$			$F (6,63) = 4.797$, $p < .01$, $R^2_{Adj} = .248$, $R^2 = .314$			$F (6,63) = 2.527$, $p < .01$, $R^2_{Adj} = .117$, $R^2 = .194$		

a. Dependent variable = Contracting (CONT).

b. n.s. = Not significant.

c. n = Sample size.

The overall goodness-of-fit for entire model (a) is; F (11, 128) = 6.31, with R^2_{Adj} = 0.296 and p < 0.01. Whereas, the model fit of the Egyptian buyer-supplier relationships (b) was; F (6, 63) = 4.797 and R^2_{Adj} = 0.25 with p < 0.01. In the third model (c) for the Chinese buyer-supplier relationships, the model fit was; R^2_{Adj} = 0.12, F (6, 63) = 2.527, and significant at p < 0.01, showing that the model fits the data set better in Egypt than in China by 13% [88].

In order to develop this furthermore, the scales of the independent variables were centered, except for the dummy variable, to overcome the potential problem of multicollinearity as recommended by Hair, Black [77]. Thus, by mean-centering we avoid the artificial results, where the main effect of a variable constituting the interaction terms is taken when the variable with which it interacts is at their mean level [89]. Therefore, to assess the effect of this interaction effect the researchers performed a partial derivative of contracting (CONT) with respect to environmental uncertainty (ENVUN) in the presence of the nationality of the owner (1 = Egyptian and 0 = Chinese). We have estimated the derivative equations below based on the regression model Equation 2 and Table 5.

$$\frac{\delta CONT}{\delta ENVUN} = b_3 + b_8 \text{ (NAT x ENVUN)} \qquad \text{... Equation (3)}$$

$$\frac{\delta CONT}{\delta ENVUN} = 0.326 - 0.373 \text{ NAT} \qquad \text{... Equation (4)}$$

Thus, the results for both the Egyptian and Chinese markets can be obtained by substituting the nationality (NAT) by 1 for Egypt and 0 for China, as the following:

$$\frac{\delta CONT}{\delta ENVUN} \text{(Egypt)} = 0.326 - 0.373 = -0.047 \qquad \text{... Equation (4a)}$$

$$\frac{\delta CONT}{\delta ENVUN} (China) = 0.326 \qquad \qquad \dots \text{ Equation (4b)}$$

Table 5: Results of hypothesis testing

	hypothesis	Results
H1	The level of contracting is significantly higher in Egypt than in China.	supported
H2	When the size of the buying firm increases, the association between supplier specific investments and contracting becomes significantly more enforced in Egypt than in China.	supported
H3	The effect of environmental uncertainty on contracting is significantly more positive in China than in Egypt.	supported

CONCLUSION

The primary objective of this study was focused on examination and comparison of the influence from cultural differences on contracting mechanism. This was achieved by examining factors contributing in textile and clothing industry within two different countries, Egypt and China. Nonetheless, this study was interested in knowing the moderating effect of supplier specific investments at the different size of firms with respect to the level of contracting between the buyers and suppliers in an exchange relationship. The findings of this study can help the stakeholders such as: decision makers and management practitioners, to better understand and coordinate buyer-supplier relationships, especially in the international market and cross culture levels, due to the complexity and ever-changing in the business environment relationships. This will improve the integration and cooperation between firms, and therefore it will increase the coherence within the supply chains and enhance the businesses.

The regression model analysis in Table 8.2 and the key findings in Equation 8.2 above show the results of this study and depict the overall goodness of fit for the model; $R^2{}_{Adj}$ = 0.296, F (11, 128) = 6.31, with $p < 0.01$, and $n = 140$. Therefore, $R^2{}_{Adj}$ = 0.296 indicating that almost 30% of contracting mechanisms can be explained by the model, while the remaining percentage (70%) can be explained by other factors not included in the research model. As pointed out in the previous chapter, the empirical findings provided significant and strong support for the three hypotheses (H1, H2 and H3) that have been formulated to be tested in this study. The three hypotheses conformed to relevant theoretical reasoning and had expected signs.

The findings highlight the fact that the level of contracting mechanism was found to be more positive in Egypt than in China and was statistically significant. In other words, the Egyptians tend to use the formal transactional mechanisms which emphasize legal conditions and incentive systems, whereas the Chinese prefer the relational mechanisms that govern exchanges through moral control and trust in the relationships between the buyers and suppliers.

Also, the study found that the association between supplier specific investments and contracting becomes significantly more enforced in Egypt than in China when the size of the buying firm increases. This means that transactional governance mechanisms are very important in restraining opportunism in economic exchange, especially when we have some levels of supplier specific investments and big firms.

Furthermore, contracts have a control effect on buyer-supplier relationships in case of unanticipated eventualities. Therefore, the partners can respond to the environmental uncertainty and deal with unpredicted problems by having both formal and relational mechanisms. Thus, Chinese firms try to adjust their strategies to respond to changes in the environment by increasing contracting in case of environmental uncertainty more than

Egyptian firms. Meaning that the third hypothesis was also significant implying that China tend to increase contracting in case of environmental uncertainty higher than Egypt.

Theoretical Framework: Transaction cost analysis, relational contracting theory and resource dependence theory are the main three theories applied in this study. From the cross-cultural perspective, Hofstede's cultural dimensions theory is used to study the effects of culture on business. Based on the three theories above and considerations of culture influence, three hypothesizes were formulated to assess the impacts of independent variables on the dependent variables. Questionnaires were designed for collecting data for the evaluation of business behavioral differences between these two countries.

Findings: Formal contracts are utilized in Egypt much more often than China. Specific investments and environmental uncertainties were found to have significant impacts on the contracting practices of Egypt and China. The finding shows that when the size of the buying firm increases, the association of supplier specific investments and formal contracting becomes much more enforced in Egypt. While, the association between environmental uncertainties and formal contracting was found to be statistically significant and higher in China than Egypt.

Theoretical Implications: The empirical findings indicate the importance of culture influences behind contracting practice in business relationship in the two countries. The emphasis on laws and regulations by Egypt society gravitate Egyptian businesses in preference toward formal contracts in business interactions. While the negotiation fluidity and behavioral flexibility of Chinese culture makes Chinese businesses less dependent on formal agreements than the Egyptians.

Managerial Implications: Globalization makes it much more pertinent for business managers and executives to understand the cultural differences and their influences on contracting practice. In order to establish and manage the long-term relationship between exchanging partners, understanding the cultural environment is all too necessary. Comparing textile industries in each country, this study provides general insights into the relation between cultural factors and contracting practice.

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