ENHANCING THE DOWNSTREAM SUPPLY CHAIN OF EGYPTIAN NATIONAL COMPANIES

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Abstract:

National products signify great importance to any nation's economic growth and stability. The goal of this research is to produce new knowledge and a deeper understanding of the current situation of national local companies operating in Egyptian FMCG sector and to investigate the applicability of improving their downstream supply chain performance through electronically linking these manufacturing local companies to a vast number of retailers by introducing an online application platform. To understand the current complex situation the case study approach was selected to investigate the inadequacy of the Egyptian national products among retailers. First, qualitative data collection was used to focus on understanding the current status and the challenges facing Egyptian Food Industries Holding Company (FIHC) as the main case study in this research. Second, quantitative data collection and analysis methods were used to identify and measure variables affecting retailers' acceptance level and willingness to trade in Egyptian products using an e-commerce business model. The results indicated that the implantation of the proposed business model taking into consideration the influencing variables and the retailers' preferences can help local manufacturing companies such as FIHC overcome challenges and can lead to real enhancement in their downstream supply chains.

Keywords: downstream supply chain, retailers, Egyptian FMCG market, e-commerce, case study

INTRODUCTION

With consumer shopping habits rapidly changing, it is vital for supply chains to respond quickly to these transformative changes. One major consumer based products are categorized as FMCGs, which are also known as Consumer Packaged Goods (CPG), these goods are described as low priced commercial packaged products that are consumed frequently. Some examples of end consumer items such as pre-packaged food and drinks, toiletries, teeth cleaning products, soap, shaving products, cosmetics, detergents, household cleaning products, glassware, bulbs, batteries, paper products, alcohol, health and beauty items, tobacco products, animal care products, and certain pharmaceuticals. In brief any non-durable products that can be easily bought off the counter for the daily usage [1].

The Egyptian FMCG market is an important market for many investors as Egypt's economy is ranked the third biggest economy in the Arab region following Saudi Arabia and the United Arab Emirates [2]. The past decade has been very eventful for Egypt; from a notorious revolution that dethroned the 30-year regime to a military coup that saved Egypt from the radical views of Muslim brotherhood, an exponential increase in inflation, an unexpected devaluation of the Egyptian currency, strict trade barriers, an increase in unemployment and many more events that shaped Egypt the way it is known today. All of the events mentioned above created instability, be it political, social or economic. Investments in Egypt became less attractive and financial panic was imminent. The country opted for an import restriction strategy and promoted the use Egyptian products [3]. This was the motivation behind this research.

There are various domestic brands that offer the same quality of products with competitive prices, but they lack consumer trust, effective marketing strategies, appropriate supply chain management (SCM) and consequently the means to achieve better penetration in the Egyptian market. In order to effectively penetrate the market SCM is a vital tool to successful integration and collaboration among the supply chain partners [4]. For Egyptian national products to regain position in the Egyptian market, their main focus shall be on the downstream part of the supply chain which is also called the distribution or marketing channel interchangeably. Distribution or marketing channels are systems of commonly dependent organizations (distributors, wholesalers, retailers) included in the process of making goods or services available for use or consumption [5].

Therefore, this research discusses the challenges facing the Egyptian Food Industries Holding Company (FIHC) as a case study and offers recommendations for these problems to help national products reach the consumers in an attempt to slowly

substitute some foreign products for a domestic ones. Moreover, the research aims to connect FIHC with retailers that are willing to accept this collaboration, and as a result the availability of the products will increase on the shelves. Thus, the research's plan is to create an e-commerce application platform that links the retailers with FIHC in order to facilitate marketing activities i.e. promotion, ease ordering and schedule distribution which will lead to improving the efficiency of the national Egyptian FMCGs downstream supply chain.

LITERATURE REVIEW

In order to realize the aim of this research, efforts have to be focused on coordinating and improving the downstream vertical relationships of the supply chain partners, thus, enhance performance and in turn render efficiencies and maximize profit. Effectually managing vertical relationships, either with suppliers or with customers, represent the concept of SCM. Vertically integrated relationships in an efficiently managed supply chain can lead to building profitable customer relationships by coordinating marketing strategies and SCM [6] [7].

Literature on SCM has been growing substantially [8] and many areas are now at the core of the discussion such as the impact of supply chain on business performance. Several definitions of SCM were proposed by researchers in literature. One comprehensive definition of SCM was formulated by [9] as follows "The management of a network of relationships within a firm and between interdependent organizations and business units consisting of material suppliers, purchasing, production facilities, logistics, marketing, and related systems that facilitate the forward and reverse flow of materials, services, finances and information from the original producer to final customer with the benefits of adding value, maximizing profitability through efficiencies, and achieving customer satisfaction".

For a sector such as the FMCG sector in Egypt improvement in supply chains of the local and national Egyptian companies is vital for subsistence as the Egyptian consumer became unfamiliar with the local brands that have been overthrown by the imported, more popular brand name products. Moreover, very little attention was paid to FMCGs as there was a common belief that their margins were too low for the investment and effort required [10]. However, with the current economic situation in the Egyptian market an opportunity is presented for FMCGs local companies to upsurge and conquer. The Egyptian retail foods sector is estimated to be $24.7 billion. Higher income consumers drive much of the demand for imported products, while middle- and lower-income consumers are tending toward substitution of imports with domestic alternatives [11]. As shown in Figure 1 devaluation of the Egyptian currency occurred in 2016 which led to a substantial increase in the prices of imported products and promoted locally manufactured products. Sales in terms of Egyptian pound seemed much higher than in USD because of the devaluation [12].
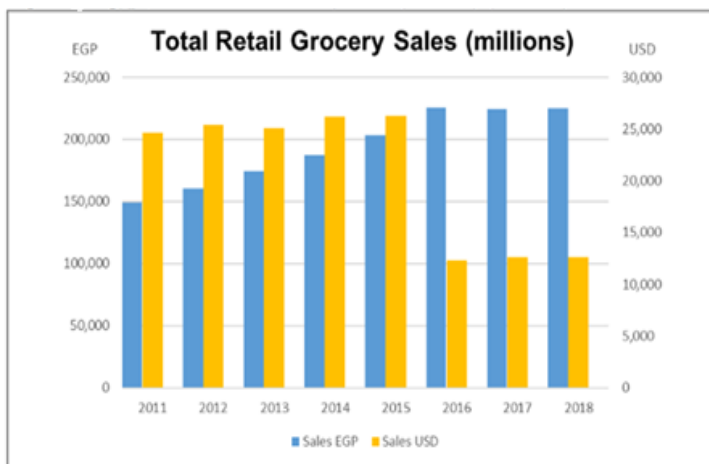
Figure 1: Egypt, Total Retail Grocery Sales (2011-2018) [12]

Egypt consumer and retail report highlights that Egypt has the largest population in the Arab world. It therefore offers retailers substantial long-term growth opportunities. The report also highlights that Egypt is becoming increasingly urbanized, supporting the rise of modern retail formats [11]. Forecasts of growth of annual average of 4.5% of household spending over 2018-2022 also promotes retailers in the Egyptian market. In local currency terms, expectations of total household spending is expected to reach EGP2.8 trn in 2022, up from an estimated EGP 1.9 trn by the end of 2019 [13] giving the retail sector a prospect to aspire penetration in the Egyptian market.

Worldwide E-commerce growth rate outpaced traditional retailing channels [14]. Plenty of young Egyptians got used to using their mobiles and other online platforms to search for products and compare prices. Within overall internet retailing in Egypt mobile internet retailing is expected to record the highest current value growth. Mobile applications started at a limited scale and were unregulated, but eventually began to take a more focused approach to users' preferences. Many key players have developed their mobile applications [3].

Food and grocery retailing is a highly fragmented retail channel in Egypt with traditional grocery retailers accounting for more than half of value sales in the channel. Since Egypt's retail sector is largely dominated by small independent retailers, the importance of these small stores is underscored by the fact that 80% of the retail trade is generated by these SMEs in emerging markets like Egypt [3].

E-commerce can facilitate trade for SME's. SME's can benefit from e-commerce by increasing revenue, reducing operation cost, reducing cost of purchasing and procurement, improving supplier relationship, extending market reach, improving speed of processing etc. As SME's use e-business, large number of SMEs using e-business are working with FMCG products, e-business is currently one of the most interesting developments in the FMCG field. It enables changing patterns of purchasing to shape new products and services [15].

One of the major Egyptian companies producing and trading in FMCG is Food Industries Holding Company (FIHC). FIHC is a state-owned company that was established 1983. FIHC has 23 affiliated companies operating in the fields of sugar industry, edible oils, soaps, detergents, preserved foods, dairy, milling wheat, rice, pasta, paper, grain storage and all strategic commodities. It is also responsible for the distribution of food commodities through Al Ahram Markets which is fully owned subsidiary of FIHC [16].

Accordingly, with the massive amount of money circulating in the retail and grocery field in Egypt, an opportunity is presented for many local FMCG companies to take advantage of the devaluation of the Egyptian currency and start to reclaim leading positions in the market. The researchers believed that this can be better realized through e-commerce practices between members of the downstream supply chain of Egyptian local companies, hence, FIHC is used as a case study in this research. Thus, the proceeding methodology aims at collecting data to identify possible implementation opportunity of an online application platform serving to connect the different players of the Egyptian local FMCGs manufacturing company downstream supply chain members, mainly local retailers.

EXPERIMENTAL

The goal of this research process is to produce new knowledge and a deeper understanding of the current situation of national and local companies operating in Egyptian FMCG sector and to investigate the applicability of improving their downstream supply chain performance through electronically linking these manufacturing local companies to a vast number of retailers by introducing an application platform to order, communicate, receive promotional offers, send complaints, track purchase history etc.

Correspondingly, the case study approach was the suitable contrivance to understand this phenomenon. The case study approach was chosen to help the researcher retain a holistic view of this real-life situation [17]. Secondary data, on the Egyptian FMCG market, retailing statistics, economy conditions, obstacles facing the Egyptian FMCG supply chain players and general information about FIHC were collected from national and international statistical reports, online references, international periodicals and journals and similar researches related to the topic. Primary data was collected from a sample of small and medium retailer and representatives of FIHC.

Descriptive and explanatory approaches were followed to serve the purpose of the research. Thus, the empirical study was divided into two phases using qualitative and quantitative strategies. Application of descriptive approach was interpreted through the qualitative data gathered using in depth semi-structured interviews with the FIHC to describe current status, the challenges, the distribution/marketing channel situation to further develop it. Additional descriptive analysis was derived from pilot interviews with the Egyptian retail sector to measure their level of acceptance towards the local Egyptian products (mainly FIHC) and the use of an electronic application platform linking them to FIHC.

Based on the literature analysis and the descriptive research phase, six independent variables were extracted to test their impact on the independent variable, namely, retailers' acceptance to trade in local Egyptian products mainly from FIHC and the use of technology in this process. Thus, a structured questionnaire was formed based on similar models in literature in addition to customized question to the Egyptian market based on the descriptive study using a likert scale. Moreover, other non-statistical qualitative close-ended questions were used to determine demographic variables and retailers' trade preferences. The survey was conducted face to face with the retailers.

In order to analyze the survey results, data was classified, then analyzed using descriptive statistical methods (SPSS) and displayed into tables with a view to interpreting their significance. Accordingly, **frequencies** are presented to measure the frequencies of demographic variables and **regression** tools to test the set hypotheses and assess the significance of the relationship between the variables. A roadmap to the methodology used in this study is illustrated in Figure 2.
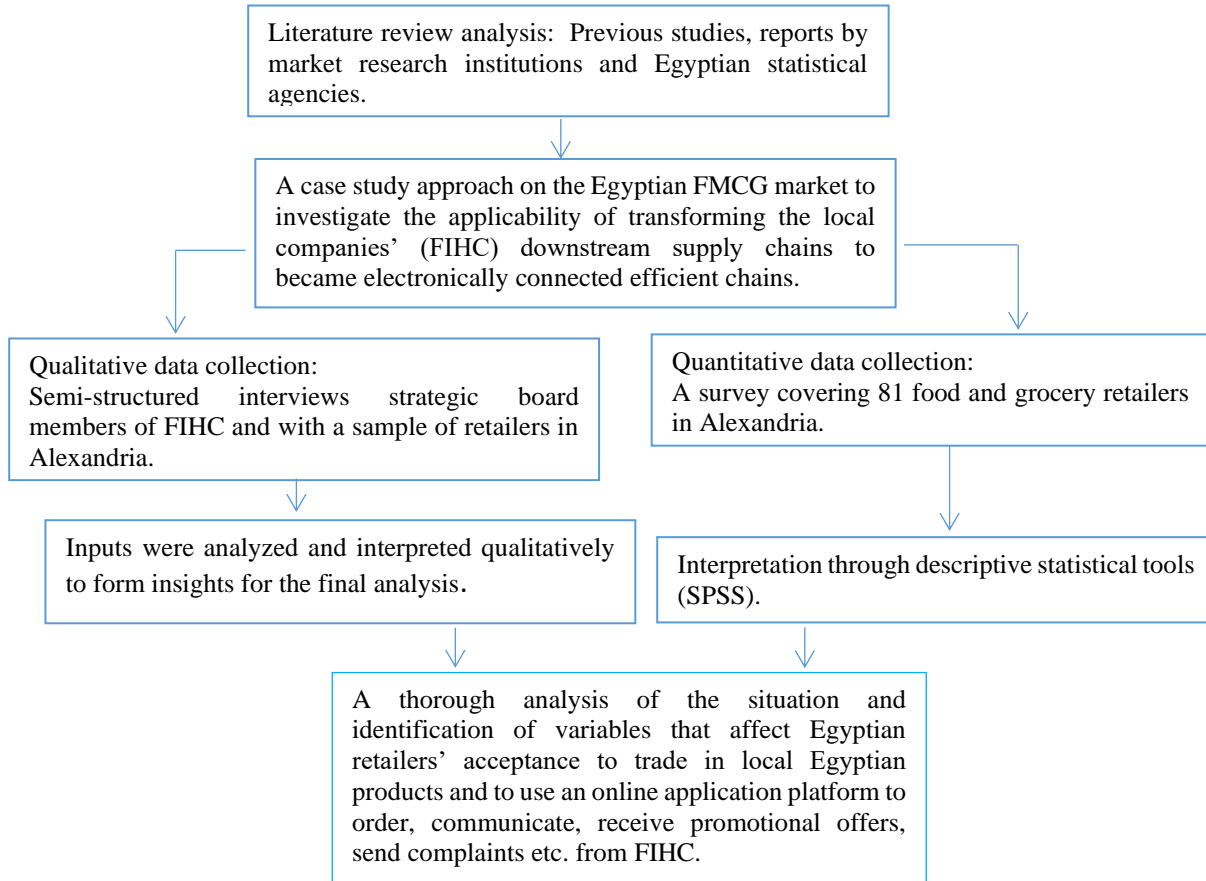
Figure 2: Methodology roadmap

The following section presents the results of the qualitative descriptive study and the explanation of the quantitative survey analysis.

RESULTS AND DISCUSSION

In the previous section, the research methodology has been discussed and the appropriate methodology was selected and presented theoretically. The aim of this section is to implement the previously proposed methodology to reach the research aim of enhancing the downstream supply chain of Egyptian local companies operating in the FMCG market particularly, FIHC as the main case study in this research, through highlighting the significance of main variables impacting the retailers' acceptance to trade with the local companies and proposing an e-commerce business model that contributes to the desired enhancement.

To understand the current complex situation of the inadequacy of the Egyptian national products among retailers, the qualitative data collected focused on understanding the current status of FIHC in the Egyptian market as well as investigating where the problem is precisely within the distribution channel, and why these national Egyptian companies are not reaching their target market effectively. Then, quantitative data was gathered to measure the retailer's acceptance level and willingness in trading Egyptian products using online application platform, as a proposed method of enhancement.

Qualitative Analysis:

After conducting an interview with the advisor of the Ministry of Supply and Internal trade and FIHC, the first undersecretary head of FIHC and the pilot interviews with a number of retailers in Alexandria, it was concluded that the following were the main challenges FIHC is facing:

- *Payment method*. This is one of their biggest problems. FIHC follows clause 203 in constitution that indicates that the company must receive the sales price as cash on delivery and this is a major issue when convincing retailers. Retailers prefer to pay after they sell while, as a national company, FIHC cannot accept this.
- *Poor marketing* due to a tight budget and lack of qualified marketers. All products of the holding company are of a high quality, but they have a very limited budget for marketing. This is due to the fact that FIHC is not a private organization seeking maximized profit, and hence the profit it acquires is mainly used to cover expenses and maintenance.
- *Type of profit margin earned*. Any retailer in Egypt gains profit through four ways:

    1. Front margin which is the perceived definition of profit (basic profit margin).
    2. Back margin which is a non-visible margin involving shelf rent, listing fees and barcodes.
    3. Business margin since the general trend is that retailers pay suppliers after 45 days, they create liquidity during this period. This money is usually used as a side investment or put as a deposit in a bank which generates interest payment every month.
    4. Retailed margin which is packing.
    Unfortunately, FIHC only provides them profit through front margins.

This situation makes retailers hesitant to trade with FIHC. Throughout the interviews the researcher proposed a solution proposed to FIHC and the retailers to overcome these challenges as a business model linking them electronically to create an easier payment method through the applicability of visa checkout and other E-payment methods granting FIHC instant collection of the due fees and the retailers an extended payment period. Also, enhancement of marketing and promotion of the products through the E-application. This solution was initially accepted by FIHC and the retailers but more variables were presented during the discussions that might impact retailers' acceptance to trade with national local companies and use technology in trading. Therefore, all the mentioned influencing variables were extracted from this qualitative study as well as literature to quantitively assess the significance of the proposed impacting variables.

Quantitative Analysis:

In this section a demographic data analysis of the survey participants is presented. Then, the hypotheses and the variables are illustrated. Afterwards, a regression analysis and models has been fitted to show the impact of the independent variables on the dependent variable.

The frequencies of the demographics are presented in Table 1; age, gender and locality. Demographic data show that 100% of the retailers were males and that 27% of the participating parties are in the 30-39 age group category which proved to be an age group accepting the use of technology, thus, might be an indicator to a successful transition to the use of online applications among Egyptian retailers in this age group. This case study research was conducted in the 2nd capital and 2nd biggest city in Egypt, Alexandria. Hence, the questionnaires were distributed among Alexandria's different neighborhoods, the majority of participating retailers were located in 3 main neighborhoods, namely, 21% in Miami, 18.5% in Sidi bishr and 17.3% in Mohram Bek.

Table 1: Descriptive analysis of the Demographics

		Frequency	Percentage
Age	18-20	1	1.2
	21-29	16	19.8
	30-39	22	27.2
	40-49	19	23.5
	50-59	18	22.2
	60 or older	5	6.2
	Total	**81**	**100.0**
Gender	Male	81	100
	Female	0	0
	Total	81	100.0

Locality			
Locality	Toson	1	1.2
	Smouha	2	2.5
	Roushdy	4	4.9
	San Stefano	2	2.5
	Mohram Bek	14	17.3
	Bahary	1	1.2
	Ebrahemia	1	1.2
	Miami	17	21.0
	Kilopatra	1	1.2
	Sidi Beshr	15	18.5
	Saba Basha	2	2.5
	El Asafra	3	3.7
	El Mandra	8	9.9
	Victoria	1	1.2
	Montaza	2	2.5
	Maamoura	4	4.9
	Gelim	2	2.5
	Zezinia	1	1.2
	Total	81	100.0

The data gathered from the participating parties and literature indicated 6 significant variables that might impact retailers' acceptance to trade in national Egyptian products. These variables are illustrated as follows:

- *Independent variables:*
  - lq4: customer demand and awareness.
  - lq5: trade and promotional support.
  - lq6: sales potential/retail margin.
  - lq7: competitors' stock.
  - lq8: supplier relationship.
  - lq9: technology acceptance.

- *Dependent variable:*
  - lq10: retailer acceptance of Egyptian national products.

The significance of these variables was tested through a regression model. Accordingly, hypotheses were prepared to test the level of significance of the independent variables on the dependent variable. Hypothesis testing is a statistical method that is used in making statistical decisions using experimental data.

Hypothesis Testing:

H1: There is a relationship between customer awareness of products and retailer acceptance of national Egyptian products.

H2: Trade and promotional support positively affect retailer acceptance of national Egyptian products.

H3: There is a relationship between profitable sales potential and retailer acceptance of national Egyptian products.

H4: There is a relationship between competitors' stocks and retailer acceptance of national Egyptian products.

H5: There is a relationship between supplier relationship and retailer acceptance of national Egyptian products.

H6: There is a relationship between technology involvement and retailer acceptance of national Egyptian products.

Model significance

Table 2: Significance level of the model

ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.629	6	2.938	9.830	.000ᵇ
	Residual	22.118	74	.299		
	Total	39.747	80			

a. Dependent Variable: Q10

b. Predictors: (Constant), Q9, Q8, Q7, Q6, Q4, Q5

The results in Table 2 showed that the independent variables combined have a significant impact on the dependent variable (retailer acceptance of Egyptian national products) because the significance level is 0.000, hence it is less than 5%, making this model reliable and credible.

Table 3: Significant level of each variable

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.052-	.102		-.510-	.611
	lq4	.440	.142	.317	3.099	.003
	lq5	.445	.143	.344	3.115	.003
	lq6	.069	.122	.053	.566	.0.00
	lq7	-.107-	.050	-.186-	-2.150-	.350
	lq8	.014	.138	.009	.103	.918
	lq9	.233	.119	.184	1.948	.050

a. Dependent Variable: lq10

Table 3 indicates the significant level of each variable. From the results shown in the above table, this research can conclude that Q4 (customer demand and awareness), Q5 (trade and promotional support), Q6 (sales potential/retail margin) and Q9 (technology acceptance) are significant because they have a value of less than or equal 0.05, which means independently each has a significant impact on the dependent variable (retailer acceptance of Egyptian national products). The highest significance was to Q6, indicating that sales and promotional support has the highest impact on the dependent variable.

Table 4 concludes that H1, H2, H3 and H6 shall not be rejected while H4 and H5 shall be rejected.

Table 4: Hypothesis testing decision

Hypothesis	Decision
H1	Not Reject
H2	Not Reject
H3	Not Reject
H4	Reject
H5	Reject
H6	Not Reject

In addition to the quantitative results the face to face questionnaires included descriptive qualitative questions investigating the retailers' preferences regarding the payment methods, delivery frequencies and suitable lead times in order to propose customer driven business modal.

CONCLUSION

As highlighted earlier, Egypt is one of the highest populated countries in the Arab world, thus making it an attractive consumer market in sectors such as the FMCG market. Therefore, the proposed business model supports the enhancement the market position of the Egyptian national products. Derived from the data, it was clearly revealed the Egyptian national companies like FIHC are not operating at their optimal efficiency, meanwhile, the Egyptian economic conditions nowadays present an opportunity for local manufacturing companies. This inefficiency was due to the feeble business methods used by these companies and the challenges facing them. Thus, in order to successfully survive in the current Egyptian FMCG market FIHC has to embrace and amend the new trends developed in the management of logistics and SCM to facilitate business operations in an efficient manner and to overcome challenges. Therefore, a business model is proposed to serve the Egyptian retailers who expressed their willingness and acceptance to trade in Egyptian national products and to use an online application to order, get instantly notified about current promotional and sales offers, conduct payment, etc. which will strengthen the buyer-supplier relationship and lead to the enhancement of FIHC downstream supply chain.

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