China Retailing in Transition –
A Dynamic and Evolutionary Perspective

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ABSTRACT

The process of deregulation to the economy is one important strand, where politics and economics meet. However, the interaction between regulated policy and economic development and the issue on how a government's ideological intervene might impact on the transition of economic system have been neglected. This purpose of this paper is to study the transition of retailing in China. Transition is defined as an evolutionary process that concerns with ongoing and irreversible changes in time, and the process vacillated with non-equilibrium and non-optimal variations driven by external and internal forces. In this study, three driving forces – government mediation, managerial effectiveness, and the market environment – are identified to evaluate China's retailing evolution after the 1978 economic reform.

The result suggests that elements associated with governmental mediation have the strongest impact to direct retailers' operating formats.

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This provides a framework to explain the emergence of different retailer ownership formats and identify several crucial factors that may influence the future retail business in China.

1. INTRODUCTION

In the last two decades, the economic development of communism China has shown unmatched strength and caught the eyes of the world. A number of studies related to the retailing were focused on the study of changing retail ownership formats when the economy is converted from command economy to social capitalism (Blois [2], Davis [13], Ho and Leigh [17], Qing and Harris [32]). Those studies sought to identify the changing operational features under the economic transformation. Blois describes the development and the roles of supermarkets in China's booming economy. Qing and Harris set aside a step further to demonstrate the performance of different retailers during the economic reform. While Ho and Leigh, and Davis used company cases as the guidance to illustrate how retailers can set up and operate business in China.

Although those studies mean to describe retailing reform and trends in China, a thorough understanding behind the resulted current composition of retail structure[1] has been absent. Similar to most retailing
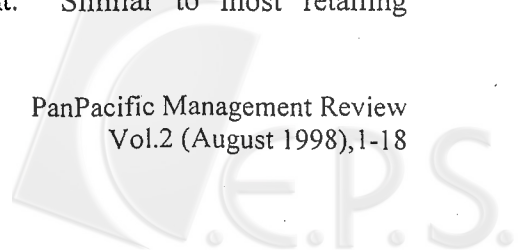
theories that have long been developed within the context of capitalist economy, these studies fail to provide enough insight to understand the underlying structure of the socialist retailing channel system. As Savitt [38] pointed out, in using the notion of structural change, we run the risk of confusing cause and effect because we often fail to recognise the definition of the "structure" itself changes. For instance, when using the shifting number of department stores as a measure of structural change and developing hypotheses on why such changes take place, it is difficult to justify whether the shifting number of stores causes the structure change or structure change leadsto store number change.

The definition of structure varies in different cultural and social systems. It is therefore important to define the scope of structure and the causality of the change. In this study, we intend to explore the causes of retailing structural changes. In particular, the evolutionary theory is introduced to comprehend how different retail ownership forms struggle to survive. Ownership form provides a retrospective measure to characterize evolutionary success on the relative increase or decrease in the descendants of a specified population. Furthermore, examination of the ownership form leads us to explore if there is any renewable sources for retailing variations and changes. Thus, the continuous selection of the fitness and the adaptation among ownership forms becomes a natural selection mechanism leading to retailing evolution.

2.LITERATURE REVIEW

The *classical economic* approach usually focuses on the performance of retailers in examining how a single retail format or the whole retail industry accommodates within the context of economic force (Bucklin [5,6,7], Mallen[27], Ingene [21,22]. Although the performance measurement such as retail labour productivity is employed to illustrate the changes in economies of scale, size of retail transactions, and degree of new technological adoption, most studies are cross-sectional; very few study has provided a comprehensive description on structural change in retailing. The only exception is Bucklin [5] in that changes in the scale of retail operations and number of retail establishments were surveyed.

The *cyclical* approach including the wheel of retailing (McNair[28], Hollander [18]), retail accordion (Hollander [19]), and retail life cycle (Davidson [12], McCammon), relates structural change to pattern movement such that variation of retail forms leads from simple to complex and then back to a simple. The wheel of retailing is to illustrate the life pattern of a retail company; retail life cycle explains the life pattern of the retail industry; and retail accordion is to describe any of the phenomena occurred in a company or within the industry. Although the cyclical approach alludes to pattern of change, the theories discard the possibility of old firm's adaptation to new conditions. When compared against a longer history of retailing, the theories may not even be correct because of their limitation to primarily a single line of trade and to a short period of time (Savitt [38]).

Most aforementioned theories consider economic development to be endogenous to the retailing structural change such that there is a strong causal relationship between the development of an economy and the
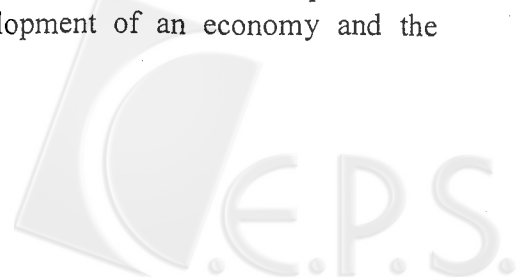
development of retail companies. However, relationships between retailing and economic development have been questioned and evaluated in a number of contexts (Brown[3], Samiee [33], Savitt [36]). On one hand, marketing and retailing are driving forces of economic development by generating efficiency and productivity; on the other, performance of marketing and retailing function is determined by the progress of economic development (Savitt [36]). Fullerton [15] pointed out that there has been a missing between the development of hypothesis testing and historical testing in retailing studies. The emphasis has been on short bites from a longer perspective and as a result we have neglected to see retailing in its larger, more complex context.

To study how retailing evolves from one economic system to another, the evolutionary theory is proposed seeking to understand how social and environmental conditions impact the population growth rate, how organisational forms are created and die out, and what are the change rates of different organisation forms. In the following, the biological evolutionary process will be presented, followed by the retail evolutionary model of this study.

3.RETAIL EVOLUTION MODEL

While most theories plunge into the work to understand the past and the current performances of societies and economies, the evolutionary theory is essential to comprehend the future progress. The evolutionary theory is to understand transformations of a structure or a system, and reciprocated interactions among them. Transformation of a structure or a system usually undertakes many different courses. Baum and Singh [1] defined evolution as the

individual entities (such as companies, political parties, and retailers) that are procreated by different evolutionary trajectories (e.g., replication, mutation, learning, natural selection) to generated different outcomes (e.g., birth, death, transformation, and extinction). Following this stream of thought (Singh [39], Singh and Lumsden [39]), evolutionary process involves who, why, and what to structure change. The *who to change* refers to any entities in the society such as retailer, wholesaler, or any intermediary agency. In this study, the individual entity is the aggregated retail ownership, including private, collective, and state-owned retail outlets, such that each entity is competing for survival in the industry. The *what to change* refers to the evolutionary outcome such as replication, variation, and mutation of retail ownership in transformation of retail structure. The *how to change* refers to any means of adaptation such as transformation or demise that are activated by enforcement forces from the entity itself, the government, and the market environment. These are detailed in the following session.

Among the enforcement forces to structure change, the most decisive impact is from the government. As North ([30]) remarks that 'political significantly shape economic performance because they define and enforce the economic rules' (p. 366). Changes in the regulation imposed by the government usually enforce the reform of a structure, especially in the transitional economy such as Eastern Europe and China. Thus, a successful policy depends on the government's capacity to insulate itself from external pressures to intervene and to restrict its own actions so that the general conditions for a free market can be maintained. Failure of any enforcement policy is due to the incapability of the government's execution,

the ignorance from the society, or changing conditions of the market.

The second enforcement comes from the evolutionary unit within the population[2], i.e., the evolving retailing forms. To survive under the structural change, each retail form has to develop management know-how for survival. This includes managerial effectiveness, marketing mix decisions, channel and logistics management, and the competitive interactions among retail forms. The practice of merchandise selection, the use of scanner technology, and adoption of new operating styles by re-engineering, acquisition, or merger are elements to be exchanged. Each form competes, replicates, and collectively evolves with others in sharpening its survival skills. Some can generate new entities or new decision rules and survive, while some fail to adopt the new changes and extinct.

The third and the final enforcement is the market environment. This includes demographic and geographic factors that are responsible for the changes in retail structure. Consumer's purchasing power, consumption pattern, social-economic background, and geographic dispersion are all possible enforcement factors to divert the paths of the structural reform (Ingene[20,21], Ortiz-Buonafina [31]). It should be noted that the *efficiency* measurement alone is not adequate enough to determine evolutionary changes. The survival of some entities and the extinction of others does not necessarily imply that the favoured entities are superior or better perform than others. Since the selection always operates relatively to a given environment, the performance of any entities depends rigorously the context of the environment which, in return, can generate significant feedback loops with non-linear effects to the selection.

To survive and to shape the entity to grow, each retailer entity has to develop nurturing schemes to counter the natural selection forces. There are four nurturing schemes in retail evolution: inheritance, multiplication, variation, and selection. For survival, each retailer entity develop should be *inherited* with some fitted "gene" such as business operation norm in usual practice. Retailers usually capture this operation know-how by the activities resided in organization's 'routine' -- a decision pattern that represents successful solution to any particular problems, or to benchmark with other survived entities. To ensure the inheritance, management capability within the retail entity is called upon to safeguard the 'routine' continues to perform well. The multiplication here refers to the safeguard of the inheritance is successful therefore the entity can multiple itself. Since multiplication can be measured in many different forms such as number of franchisees, total outlet sales, and cumulated profits, it should be noted that the most profitable retailer does not necessarily imply it is the fittest in natural selection. *Variation* refers to the entity's evolving new form in replacing the old one. It can be arisen in many different forms such as different ownership (e.g., state-owned, collectively-owned, and private owned), different operation (supermarket vs. convenience store), or different managerial style.
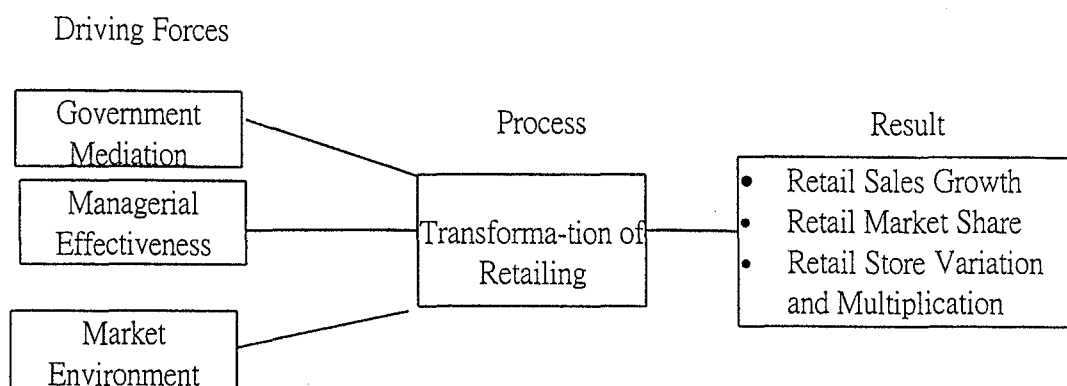
Driving Forces

Figure 1: The Retail Evolutionary Model

4. METHODOLOGY

4.1 Data

Secondary data were used to calibrate the impact of political transition and economic reform on retail evolution. Data variables including macro economic indicators, domestic trade, and labor employment statistics are hypothesized as explains of the evolutionary model while market share of retailing forms' sales volume as explanandum. Time series data were obtained from various statistical yearbooks covered the period from 1978 to 1995 from China Statistical Publishing House. To justify the inflation, all monetary variables were inflated on the basis of 1995 retail price index.

Since Chinese government does not fully adopt the Western statistical measurement scheme, interpreting the data and the results should be cautious. For instance, a large proportion of income package earned by state-owned retail staffs is contributed by the non-monetary compensations including housing, staple foods, and other fringe benefits, their relatively low salary cannot reflect the truth of their household income. Another caveat is the missing data. Prior to the economic reform, the economy under communist regime was widely fluctuated; data during this period are either unavailable or incomplete. To compensate this, an in-depth review of the literature in the political and economic issues will be provided.

4.2 China Economy in transition

China's legitimate economic reform started when the Chinese Communist Party (CCP) announced in the 1984. In April 1988, the Seventh National People's Congress further admitted the contribution by the private enterprise. This has been changed from the previous agenda that "planning is the primary role while market is the supplementary to the planned economy" to develop China as a "socialist market economy"[3]. Before adopting the economic reform, the state government's macro-economic policy has focused upon the primary and secondary industries[4] which commanded 31.74% and 45.13% of GDP respectively. After 1984, the composition of GDP changed dramatically. The average primary industry value was 23.46%, down by 26%; while the average tertiary industry value was 31.48%, up by 36.1%; with secondary industry remained the same (see Table 1).

Table 1The Composition of GDP in China, 1978-1995

	Year 1978-84	Year 1985-95	Change rate
Gross Domestic Product (billion yuan)	16164.71	37408.53	+131.42%
GDP by primary industry	31.74%	23.46%	-26.09%
GDP by secondary industry	45.13%	45.06%	-0.16%
GDP by tertiary industry	23.13%	31.48%	+36.10%

The new policy also had a notable impact to governmental revenue. Before 1984, the government revenue generated by the private enterprise was minimal. After the reform, the private enterprises contributed 9.11 per cent of the total revenue, an increased rate of 8 times compared to the former. The development of private-owned sector with the accelerated privatization process has posted the threat to the state-owned enterprises, which were once viewed as the spinal cord of the government body (Jefferson and Rawski [24], Fan and Woo [14]). Moreover, at the on-going 15th CCP National Congress, the growing power of private enterprises has led the government to consider seriously whether to implement the structural reform of the ownership[5].

4.3 China Retailing in Transition

Retail sector in China was relatively under-developed because of government's tight control. Before economic reforms, the Ministry of Commerce (now is known as the Ministry of Domestic Trade) allowed only the state- and collectively- owned retailers to operate. As the direction has been shifted to privatisation, the state government is now eager to acquire new retailing techniques and management skills from foreign investors. The decision promulgated by the Central Committee of the Communist Party of China and the State Council Concerning

Accelerated Development of Tertiary in June 1992 was the turning point for foreign participation in the retail sector. Insofar, the State Council has only approved sixteen joint ventures in the coastal cities[6]. Yet the presence of global retail players from western countries including Careful of France, Yaohan of Japan, and Wal-Mart of US has demonstrated the sea of change to the industry.

The private-owned retail sector has gone through several transformations cycles since the private ownership was officially allowed in response to the political philosophy change[7] in 1978. Though the number of so-called "individually-owned enterprise" (getihu) is limited in scale, this fraction has become the most active and thriving sector in economy[8]. In 1978-84, the retail sale shared by private sector was 6.81%, while the collectively-owned and state-owned retailers shared 43.03% and 50.16% respectively. After the reform, the private-owned retail sector has achieved some momentum: it has commanded 32.35% of share, which surpassed 29.87% of the collectively-owned and devoured the state-owned to an alarming share of 37.78% (see Table 2). In particular, during 1993, the private retail sales achieving 504.47 billion-yuan surpassed the state-owned retailers, 467.64 billion-yuan and collectively-owned retailers, 274.1 billion yuan (see Figure 2). As William noted, "In China, sizeable state-owned firms are

virtually never closed down. Hence, those under pressure to leave an industry suffering from excess supply invariably were small

rural collective enterprises..." (p. 89).

Table 2 Market Share of Retailers

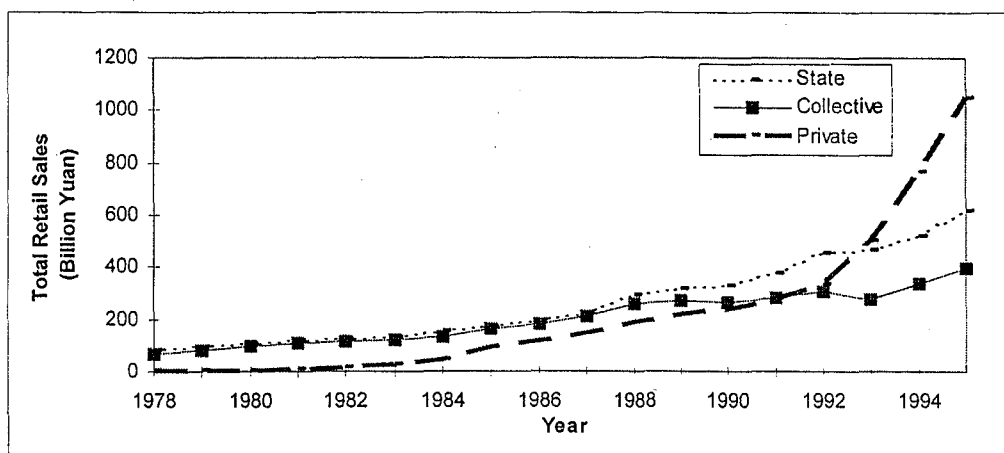|	Year 1978-84	Year 1985-95	Change rate
State-owned retail sales	50.16%	37.78%	-24.67%
Collectively-owned retail sales	43.03%	29.87%	-0.31%
Private-owned retail sales	6.81%	32.35%	+375.04%

Figure 2 Total Retail Sales by Ownership, 1978-1995

To encourage booming private sector but also to protect state-owned retailers, the Ministry of Internal Trade has tightened up a new policy for new entries such that only efficient, reputable, and strong financial backup retails are allowed. Despite this, the consumers can now enjoy a larger number of sophisticated retail enterprises that offer a wider spectrum of products while foreign participation continues to squeeze the feeble players out from the market. As Yip[41] has observed: "under the command economy, resources were allocated on an administrative rather than a demand basis and consumer's 'needs' were determined by the state. Consumers had little ability to choose... and foreign products were almost non-existent. Today... Chinese consumers are still trying to catch up with the proliferation of brand

names on the market and they are still trying to find ways to choose between imported brands, joint-venture brands and local brands."

4.4 Model Testing

To capture the above mentioned transitions, the natural selection enforcement forces proposed in the Retail Evolutionary Model (Figure 1) are used to categorise the associated variables. In particular, twenty-eight variables used in the past-related studies are identified. These include sixteen variables in governmental liberalisation, eight in managerial effectiveness, and four in market environment. In the similar studies, Bucklin [5] identified six variables including number of stores per capita,

percent of sales by department stores, wage rate, per capita income, population density, and a dummy variable representing time change, in measuring the US retail productivity. On the same token, Ingene [21]) employed grocery floor space per employee, average store size, population growth rate, retail wage rate, number of "mom & pop" stores per thousand population, retail space saturation, availability of private transportation, income and household size to study labour productivity in the US retailing. While most studies were conducted in US, Oritz-Buonafina [31] has recently conducted quite a comprehensive work by modifying the variables employed in literature to measure the retail productivity in Guatemalan.

In this study, twenty-eight variables are identified. Most of the variables correspond to Bucklin's masterworks in 1972 and 1978 and the transitional economics literature. Since China has long been a communist society, the market mechanism is different from the western societies. Although China is in the transition to the socialist market economy, the government still plays a significant role in determining the market condition. A number of specific variables are therefore selected to assess if impacts on the market performance exist. Comparisons of past studied with the current selected variables are summarised in table 3 (see Appendix 1).

To assess the impact of different enforcement forces on the survival of retail forms, the principal components regression analysis is performed (Hair, Anderson, Tatham, and Black [16]). There are two stages involved in the principal components for subsequent regression analysis. In the initial phase, the principal component analysis (PCA) is used to summarise the original information in a minimum number of factors or dimensions for further statistical analysis. The principal component analysis can provide an explanatory model that is of interest to inquire initially on the original functional structure, without loss of much information in substantial data reduction. In the second phase, the factor scores of components derived from PCA become the predicting variables for the subsequent multiple regression analysis.

5. RESULT

5.1 Phase 1 -- Principal Components Analysis

The first component, government liberalization (GOV1), which summarizes the structure of ownership, openness, and population control policy, accounts for 43.74% of the total variance. The elements in *the structure of ownership* including industry outputs produced by collective and private enterprises and private retail sales are positively correlated to the government liberalization with factor loading of .978, .779, and .932, respectively. Positive loading of each element represents the importance of non-state business contributions to the economy in China. Similarly, the negatively loading on the remaining elements including industry output produced by state-owned enterprises (-.916), collectively-owned retail sales (-.872), and state-owned retail sales (-.950) represent substantial changes in its ownership structure in favor of private enterprises.

Openness is the second factor representing government liberalisation. Positive loading on its elements including export as a percentage of GNP (.868), monetary value of gross domestic products (.868), and monetary

value of savings (.803) represent the high degree of economic openness. Obviously, a reduction in the scope of the command-style foreign trading planning, an expansion in foreign trade autonomy, and the encouragement of exports by government are mainly to support the economic reform. With permission to withhold or retain the foreign exchange currency, it has given the local business opportunities to engage in foreign trade. Thus, the average export value increased from 6.8% of GNP in 1978-84 to 15.09% in 1985-95. As a result, it is not surprisingly that the loading of export as a percentage of GNP on government liberalization is as high as .868. On the contrary, the remaining substances of openness are negatively correlated with government liberalization. Negative loading on revenue generated from enterprises as a percentage of total government revenue (-.935) and government expenditure as a percentage of GNP (-.932) represent the change in government policy towards the enterprises. Government revenue generated by state-owned enterprises was massive before reform[9]. However, the continuing reform in economy leads to a considerable change in the composition of government revenue. The government is now implementing a taxation system to generate income rather than to obtain revenue directly from the enterprises. The launch of taxation system is claimed to be much fairer to all forms of enterprises. As the economy is becoming more open, direct revenue generated from the enterprises will be decreasing. Regarding the government expenditures to GNP, it is negatively correlated to government liberalization. As less and less government subsidies pour into the state-owned enterprises, this leads to a decrease in government expenditure. Thus, the negative loading with government expenditure reflects the government liberalization impact.

The third element of government liberalization is *the population control policy*, which consists of the population size and proportion of urban population. Positive loading of population size (.932) and proportion of urban population (.960) on government liberalization are expected. Since 1972, the Chinese government has adopted the single-child policy, which allowed each couple to have only one child in their family. Bearing any additional child is subject to heavy monetary punishment and exploitation of all welfare services such as free education and medical care. As the economy grows, some people are becoming richer, thus allowing them to pay for punishment in order to have more than one child in a family. On the other hand, the proportion of urban population implies the migration changes. Since the 1950s, migration has been controlled by the central government, mainly to prevent peasants from migrating to urban areas. Migration was extremely difficult across regions[10]. But after late 70s, the reform has made the illegal migrants easier to be accessed via labor market. When economies in some key and coastal cities are developing, they require plenty of cheap labor force from rural areas. As a result, illegal migration has increased dramatically between 1980s and 1990s[11].

The second component, managerial effectiveness (MGT) which summarizes the retail employee sales productivity and retail wage rate explains 31.82% of total variance. The negative loading of state-owned retail sales per state retail worker (-.933), average retail sales per retail worker (-.902), collectively-owned retail sales per collectively retail worker (-.799), and private retail sales per private retail worker (-.753) represent low retail sales productivity per

worker. The negative sign is due to the enormous supply of labor force in the service sector in the recent years. In particular, when the Chinese government starts to reform the state-owned enterprises, a large number of state workers were forced to leave the factories[12]. Regardless of ownership form in retailing, there is negative relationship between the sales productivity and the managerial effectiveness. Nevertheless, the results show that the loading on private retail productivity is less serious than either collective or state owned. In other words, the management in private retail sector is a bit effective than the others.

In Bucklin's word, retail wage rate is a symbol to measure the quality of services: the higher the retail wage rate, the better the service quality. The results show the positive loading between retail wage and average retail sales (.945), and on managerial effectiveness, private retail payroll as a percentage of private retail sales (.930), state-owned retail payroll as a percentage of state retail sales (.928), and collectively-owned retail payroll as a percentage of collectively-owned retail sales (.919).

The third component, market environment (MKT) which summary consumption structure, mobility, and purchasing power, explains 8.63% of total variances. During late 70s and early 80s, *consumption structure* shifted from basic necessities to the so-called "three major items", available in many retail channels other than state-owned retailers[13]. The distribution system of basic necessities has gradually deteriorated since the mid-

eighties. Consumers are no longer bounded to state distribution. They are now enjoying a wide variety of products as well as distribution channels. Thus, the ownership of refrigerator and television in consumption structure represent positive correlation to the market environment, with loading .751 and .711 respectively.

The element *mobility* represents the average number of seats for public and private transportation vehicles, in a loading of .689 with market environment. Bucklin denoted that public transportation makes people possible to travel beyond the trading area of a store in respect to the retail promotion.

The purchasing power as a proxy of urban household income has been on the rise after reform. The positive loading of urban income (.583) on the market environment shows the moderate correlation between them.

The fourth and fifth components, economic potential (GOV2) and foreign investment potential (GOV3) explain 6.93% and 3.72% of total variance respectively. Two other components are also attributed to government liberalization. The high and positive loading of real economic growth (.947) and current economic growth (.933) show a close association with the government liberalization. Though the loading of the foreign investment is moderate in size (.653), it also demonstrates one of the substances in government liberalization.

Table 4 Principal Component Analysis

REM	Input Variables	Components				
		Governmental liberalisation	Managerial effectiveness	Market environment	Economic growth	Foreign investment potential
GOV1	**Structure of ownership**					
	industry output produced by collective enterprises	.978				
	industry output produced by state-owned enterprises	-.916				
	industry output produced by private enterprises	.779	.595			
	collective-owned retail sales	-.872	-.415			
	state retail sales	-.950				
	private retail sales	.932				
	Openness					
	export as a percentage of GNP	.868				
	revenue generated from enterprise as a percentage of total government revenue	-.935				
	government expenditure as a percentage of GNP	-.932				
	gross domestic products (GDP)	.868	.437			
	savings	.803	.544			
	Population control policy					
	population	.932				
	percentage of population living in urban area	.960				
MGT	**Retail employee sales productivity**					
	state-owned retail sales per state retail worker		-.933			
	average retail sales per retail worker		-.902			
	collective-owned retail sales per collective-owned retail worker		-.799			
	private retail sales per private retail worker		-.753			.517
	Retail wage rate					
	average payroll as a percentage of average retail sales		.945			
	private retail payroll as a percentage of private retail sales		.930			
	state-owned retail payroll as a percentage of state-owned retail sales		.928			
	collective-owned retail payroll as a percentage of collective-owned retail sales		.919			
MKT	**Consumption structure**					
	ownership of refrigerator	.529		.751		
	ownership of television	.603		.711		
	Mobility					
	number of seats of public and private transportation vehicles	.606		.689		
	Purchasing power					
	urban income	.548	.542	.583		
GOV2	**Economic potential**					
	real economic growth (at 1995 price)				.947	
	economic growth (at current price)				.933	
GOV3	**Foreign investment potential**					
	foreign investment as a percentage of total investment	.438		.456		.653
	Sum of Squares (Eigenvalue)	13.56	9.86	2.68	2.15	1.15
	Percentage of Variance	43.74	31.82	8.63	6.93	3.72
	Cumulative Percentage of Variance	43.74	75.56	84.19	91.12	94.84

traction method: Principal Component Analysis; Rotation method: Varimax with Kaiser Normalisation

ctor coefficients less than .400 were deemed insignificant and omitted from the table.
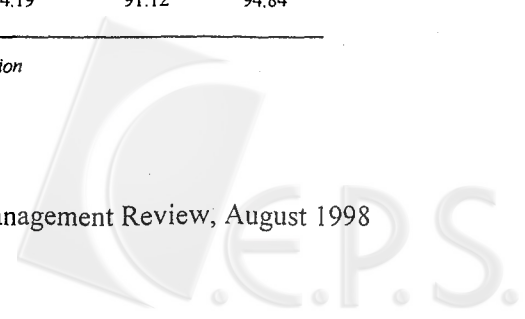
5.2 Phase 2 -- Principal Component Regression

This procedure tests the impacts of different enforcement forces on the structure of retailing. The evolutionary fitness of retailers are measured by the value of retail sales for each ownership type -- which are defined as dependent variables for regression analysis. Independent variables are the five components, namely government liberalization (GOV1), economic growth potential (GOV2), foreign investment potential (GOV3), managerial effectiveness (MGT), and market environment (MKT) that derived from PCA. Because of the properties and characteristics of PCA, the five components are independent of each other in varimax rotation.

Along the period of reform from 1978 to 1995, the Chinese government has adopted policies favorable to the private sector since 1984. The private retail sales has been on the rise since then. To capture the time changes before and after reform, a dummy variable coded to the value of zero on or before 1984, and value of one after 1984.

The regression results on the overall retail industry and each ownership forms are shown in table 5.

Table 5 Regression Model

Independent variables	Dependent Variable = Retail Sales			
	Total [a]	State-owned [a]	Collectively-owned [a]	Private [a]
Liberalisation (GOV1)	.868***	1.098***	1.132***	.573***
	(6.677)	(4.290)	(6.285)	(4.816)
Managerial Effectiveness (MGT)	.202***	-.046	-.635***	.493***
	(5.177)	(-.601)	(11.730)	(13.787)
Market Environment (MKT)	.181***	.167*	.157**	.164***
	(5.302)	(2.492)	(3.327)	(5.277)
Economic Growth Potential (GOV2)	.077*	.136	-.031	.071*
	(2.231)	(1.994)	(-.638)	(2.232)
Foreign Investment Potential (GOV3)	.049	.259**	-.009	-.027
	(1.338)	(3.602)	(-.174)	(-.804)
Time: capture the change from 1985-95 over 1978-84	.091	-.192	-.377*	.314*
(TIME)	(.688)	(-.735)	(-2.053)	(2.591)

*adjusted R square=0.981; *at 0.05 level of significance, **at 0.01 level of significance, ***at 0.001 level of significance;*

[a] *t-values are in parentheses*

With regard to the overall retail industry sales, correlation with GOV1, GOV2, MGN, and MKT are positively significant while GOV3 and dummy time factor are positive but not significant. The results suggest that the total retail sales can be accounted for by the high degree of government liberalization (i.e. the small extent of government mediation), effective management, good market environment, and economic growth potential.

For state-owned retail sales, the results show that it can be accounted for by the government liberalization, market environment, foreign investment potential and economic growth potential while managerial effectiveness and time factor are not significant. Undoubtedly, the state-

owned enterprises are still held by state governmental means of control, and have no right to make their own selections with regard to the people they employ, much less the power to fire any worker. Thus, the incentive to manage the business effectively is minimal.

For collectively-owned retail sales, the results suggest that it can be accounted for positively by the government liberalization and market environment but negatively by managerial effectiveness and time factor while economic growth potential and foreign investment potential are insignificant. Ineffective management deteriorates collectively owned retail sales.

Regarding to the private retail sales, it can be accounted for positively by all components except the foreign investment potential. The rapid growth in private retail sector is highly dependent upon the low extent of government mediation, effective management, healthy market environment, and growing economy. Compared to the state-owned and collectively owned retail sales, the private-owned retail sales are the only structure form that is significantly associated with time factor. Thus, the release of state mediation provides a healthy investment environment for the private enterprises.

6. CONCLUSION AND IMPLICATION

Bucklin [5,6] regarded structural evolution as a proxy for competition between different operational arrangements in a given economic structure. But in China, the economy is not a planned economy but yet to be fully privatized. Because of this dual-track structure, i.e., market economy plus planned economy, it is inevitably that retailers will react differently upon the government mediation, management style, and market environment.

In this study, we found that the governmental liberalization and market environment play the most significant role to all retailer forms while managerial effectiveness has positive impact only to the private retailers. At the 15th CCP National Congress, the state government has continued to encourage state enterprises to transform themselves through adopting the privatized share holding system. As a result, an increase in the private retail sector will be expected. In addition, domestic trade policy is deeply concerned with the foreign investment in retail sector and will further invite large and reputable foreign retailers to participate. With the positive support towards the foreign investors, 'unfitted' local retailers will be squeezed out of the market. Yet the competition among the Chinese retailing is not as fierce as in the market economy because of the government's double-track policy.

To conclude, the retail evolution model proposed in the paper has helped to identify the impact of evolutionary enforcement. Though the managerial effectiveness and market environment play important roles in the retail structure in western societies, these two factors are less important in China. As the marketers, we should better evaluate the effect within a particular set of parameters and to overview each set of enforcement comprehensively in different environments.

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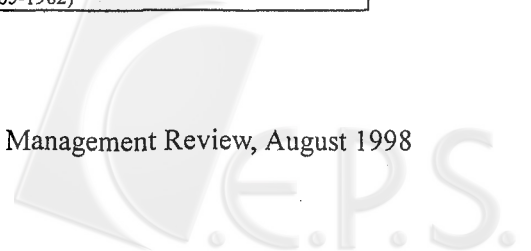
FOOTNOTE

[1] The retail structure refers to the ownership forms consisting of state-owned, collectively owned, and private-owned.

[2] Population is defined as a group of coevolutionarily interacting organisations [firms or any entities] that embody similar combinations of key production and organising knowledge and skill (Baum [1], Mckelvey [26]).

[3] see Article 11 of the Chinese Constitution

[4] According to China Statistical Bureau, the industrial classifications are: primary industry refers to fishery, agriculture, husbandry; secondary industries include mining, manufacture, water supply, electricity generation and supply, and construction; tertiary industry includes all other industries which are not included in primary and secondary industries. Service industry is classified into tertiary industry.

[5] See Xinhua News Agency 27/09/97.

[6] In 1992, foreign investors can jointly open retail business in Shanghai, Beijing, Guangzhou, Tianjin, Qingdao, Dalin, and five special economic zones namely Xiamen, Zhuhai, Shenzhen, Shantou, and Hainan. The maximum of two joint-ventured retail projects in each aforementioned city are allowed.

[7] In China's official ideology, private ownership had long been described as related to exploitation, anarchical competition, destructive cyclical crisis, class conflict, and all other kinds of social evils (Chen, 1996: 128).

[8] Xinhua News Agency, 28 June 1988.

[9] In 1978-84, 85.66% of government revenue generated was contributed by the state-owned enterprises, while there were 13.26% and 1.07% by collectively-owned and private enterprises respectively.

[10] The core of control lies in the 1958 Regulation on the Registration of Households, which requires every household to register its place of residence, and to gain permission for any change in residence. During the period until the early 1980s, migration without permission was extremely difficult. Food was strictly rationed, with food rations allocated on the basis of one's official residence. To move without permission would therefore mean to forego one's food rations. In addition, children of illegal migrants would be denied access to schools, and other welfare services provided in urban areas would similarly be unavailable to unregistered migrants.

[11] An official estimation of 100-150 million people have illegally migrate to the urban areas in the mid nineties.

[12] The 15th Community Party Congress has decided to sell off state enterprises. High unemployment rate will be expected. There is an estimation of 15-20 million excess workers in state-owned enterprises and 100 million in agriculture (Hong Kong Standard 25/09/1997).

[13] "Three major items" refers to wristwatch, bicycle, and sewing machine in 70s and early 80s; and redefine as refrigerator, television set, and washing machine. In early 90s, the three major items were redefined as air-conditioner, personal computer, and microwave oven, which could be available in different market channel such as private retail outlets, joint-venture department stores, or factor outlets.
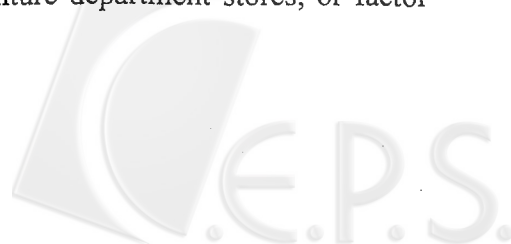
APPENDIX 1

Table 3Comparison of variables in the past studies and current study

Past Studies	Concept Measured	Input Variables
Bucklin (1978)	Scale economies	Number of stores per capita
	Increased service levels	Percent of sales by department stores
	Better use of employees	Wage rate
	Transaction size	Per capita income
	Aggregate demand	Per capita income
	Greater competition	Population density
	Better technology	Population density
	Better store location	Population density
	Time	0 for first year, 1 for last year
Ingene (1982)	Capital/labour ratio	Grocery floor space per employee
	Technology	Grocery floor space per employee
	Store size/ scale economies	Average store size
	Atmospherics/ layout	Population growth rate
	Site location	Population growth rate
	Efficient use of labour	Retail wage rate
	Labour quality/ service levels	Number of "mom & pop" stores per 1,000 population
	Managerial attitudes	Retail space saturation
	Market size	Retail space saturation
	Degree of competition	Retail space saturation
	Mobility	Available private transportation
	Transaction size	Income
		Household size
Oritz_Buonafina (1992)	Scale of market	Per capita income
	Shopping patterns	Per capita income
	Resource use	Per capita income
	Productive capabilities	Per capita income
	Store size and scale economies	Population growth rate
	Increase urbanisation	Population growth rate
	Better use of employees	Average wage rate
	Increased levels of productivity	Average wage rate
	Large stores	Population density
	Better technology	Population density
	Better atmospherics/layout	Population density
	Increased services levels	Urban stores per 1,000 population
	New patterns of retail development	Urban stores per 1,000 population
	Intended to capture change over time	Time series (9165-1982)

Current study		
Constructs	Concept Measured	Input Variables
Government Mediation	Structure of ownership	industry output produced by collective enterprises industry output produced by state enterprises industry output produced by private enterprises state-owned retail sales collectively-owned retail sales private retail sales
	Liberalisation	export as a percentage of GNP revenue generated from enterprise as a percentage of total government revenue government expenditure as a percentage of GNP gross domestic products (GDP) savings
	Population control policy	population size percentage of population living in urban area
	Economic potential	real economic growth (at 1995 price) economic growth (at current price)
	Foreign investment potential	foreign investment as a percentage of total investment
Managerial Effectiveness	Retail employee sales productivity	average retail sales per retail worker collectively-owned retail sales per collectively-owned retail worker state-owned retail sales per state retail worker private retail sales per private retail worker
	Retail wage rate	average payroll as a percentage of average retail sales collectively-owned retail payroll as a percentage of collective-owned retail sales state-owned retail payroll as a percentage of state retail sales private retail payroll as a percentage of private retail sales
Market Environment	Market environment	ownership of refrigerator ownership of television number of seats of public and private transportation vehicles urban income