Drivers of Performance of Franchisees: A multi-level analysis

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Abstract

The aim of this study is to examine the drivers of performance of franchisee organizations. We hypothesize that age, size, obligatory assortment decided by central franchisors, distribution of power from franchisors to franchisees, frequency of franchisor's visit to franchisee are positively associated with performance of franchisees. The survey data at 186 franchisees are used to test the proposed hypotheses. Principal component analysis and hierarchical linear model are applied in this study. Hierarchical linear model results reveal that whether the proposed hypotheses are statistically supported depending correspondingly on how franchisees' performance is measured. The paper provides some implications to franchisee literature.

Key words: franchisee, age, size, obligatory assortment, power.

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1. Introduction

In recent decades, franchising is considered as one of the fastest growing forms of business in the global economy (Croonen and Brand, 2015; Justis and Judd, 1986;) and represents nearly one third of domestic retail sales in many countries (Boe et al., 1989). Kedia el at. (1994) shows that franchising is a specially effective case of licensing in which the franchisor provides the use of a trademark or service mark, assistance in opening the business, training for the franchisee. There are several reasons in preference to employ franchising to other strategies since it provides benefits for both franchisors and franchisees. On the one hand, franchising supplies a means of expansion with minimized risk and minimized franchisor costs in order to minimize governance costs while maximize the ultimate returns to the franchisors. On the other hand, franchising offers franchisees the advantage of starting up a new business quickly based on a proven trademark and formula of doing business and provides franchisees significant training, which is not available for free to individuals starting their own business (Brickley and Dark, 1987; Brickley et al., 1991; Carney and Gedajlovic, 1991; Caves and Murphy, 1976; Martin, 1988; Mignonac et al., 2015).

In order to survive and develop in a competitive business environment of global economy, performance evaluation plays as an important role to encourage franchise organizations in general and franchisees in particular to improve their performance. Through performance evaluation, one can reveal the strengths and weaknesses of franchise organization operations and factors influencing their performance (Fenwick and Strombom, 1998). For example, in some research, the number of year's franchisee in this chain, distribution of power from franchisor to franchisees have positively affected the franchisee's performance (Porter, 1980; Aldrich and Auster, 1986; Frazer et al., 2007). However, others found the negative effect of these factors on the performance of the franchise organizations (Castrogiovanni et al., 1993; Castrogiovanni and Justis, 2002; Gassenheimer, et al., 1996).

This paper seeks to understand the factors affecting the performance of franchise organizations in retailing by answering the research question: What factors affect the franchisees' performance within franchise system? The secondary data are collected from 186 franchisees in 23 franchise organizations and subjected to factorial analysis and hierarchical linear model. Factor analysis is a useful tool which is employed in the first step to assess the structure underlying the franchisees' attitude towards franchise performance. After obtaining satisfactory scores from the first step, the hierarchical linear model applied in the next step focuses on examining factors affecting the performance of franchise organizations. The hierarchical linear model is applied since data is collected at two levels franchise organizations and franchisees.

Our paper is constructed as follows. Section 2 discusses the literature review of some factors which influence the performance of franchise organizations; and then we formulate research hypotheses. Section 3 is contributed to describe data, variables and research methodology and discuss how it is important to choose these methods. Continuously, the empirical results will discuss in details in section 4. Section 5 comes up with discussion, conclusion, implications and further research.

2. Literature review and hypotheses

A rich body of franchisee literature categorizes the determinants of franchise organization's performance. Scholars indicate that age and size of franchisee are two categories of drivers that affect franchisee performance because these factors cannot be easily controlled by the franchisor in the short term (Castrogiovanni and Justis, 2002; Nijmeije et al., 2014). In addition, other studies also found that strategic decisions regarding governance of franchisor also determine franchisee performance (e.g., Dant et al., 2013; Pandey and Wooldridge, 2003). Thus, this study examines the franchisee characteristics and strategic factors that drive franchisees' performance.

The number of years of franchisees participating in franchise chain Gassenheimer et al. (1996) investigating at 3,400 fast food franchisees of 19 franchise organizations found that there was a negative relationship between franchisee performance and number of years of franchisee in the franchise system. Their finding implies that the franchisees' performance decreases as they accumulate greater experience. In addition, a number of studies show that the experience of a franchisee affects its failure rate (Dant et al., 2013; Nijmeije et al., 2014). For instance, Castrogiovanni et al. (1993) found that failure rate declines as franchisees get older because franchisees learn more about how to survive and prosper. Based on previous literature, our viewpoint is that the longer time franchisees have operated in franchise system, the more experiences they gain. As a result, costs are likely to decline, the franchisee performance improve. Therefore, we propose the following hypothesis:

> **Hypothesis 1:** *the number of years of franchisee in franchise system is positively associated with its performance.*

The number of part time and full time employees in franchisees several studies indicated that there is relationship between number of employees, estimated for franchisee's size, and franchisee's performance. Using data from the U.S. Bureau of the Census, Bates and Nucci (1989) found that franchisee with 10-50 employees had failure rates averaging around 4 percent. They concluded that the more number of employees in franchisees, the higher performance they obtain. Several authors argue that after controlling for business type, size of franchisee - measured by the number of employees is negatively related to franchisee's failure rate (Castrogiovanni et al., 1993; Croonen and Brand, 2015). However, there is no evidence to find this conclusion. Hence, we posit the following hypothesis:

> **Hypothesis 2:** *the number of fulltime and part time employees is positively associated with the performance of franchise organizations.*

Obligatory assortment decided by central franchisors Kaufmann and Eroglu (1998) distinguish core elements and peripheral elements of a business format. According to these authors, the core elements of the business format should be standardized across franchisees without exceptions. The peripheral elements are amenable to adaptations if they affect a higher customer value by matching consumer needs more closely (Mignonac et al., 2015). Thus, they argue that as central franchisor has required franchisee's business format to be more similar to its business style, the franchisee's performance is higher. Therefore, we come up with the following hypothesis:

> **Hypothesis 3:** *The higher the percentage obligatory assortment by the franchise chain, the higher the performance of franchise organizations.*

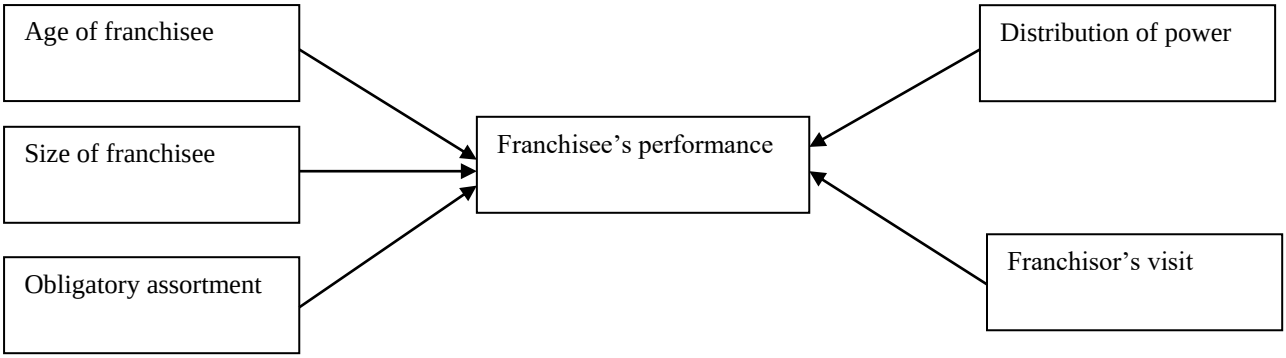
Distribution of power from franchisors to franchisees Power is the main avenue available to channel member participants to facilitate cooperation and to achieve desired goals (Coughlan et al., 2001). In the franchising relationship, the franchisor possesses and controls resources that are useful to franchisees (Coughlan et al., 2001; Dant et al., 2013; Frazer et al., 2007). In addition, French and Raven (1959) indicated that several bases of power have been identified in marketing channels: reward, coercive, expert, referent and legitimate power and each of these is relevant to franchising arrangements. For instance, franchisors have the ability to motivate superior franchisee performance through the offer of *legitimate power* (Frazer et al., 2007). Moreover, in a franchising arrangement, the franchisee is heavily dependent on the franchisor, particularly in the early stages where the learning curve is steep. Several researchers have investigated the effect of distribution power from franchisor to franchisee. In a study of fast-food franchising, Hunt and Nevin (1974) found that greater franchisee satisfaction occurred when non-coercive sources of power were used. Similar findings were reported in a study of vehicle manufacturers and dealers (Lusch, 1977). Furthermore, excessive use of power by the franchisor (Dan et al., 2007; Dant and Nasr, 1998; Dant and Gundlach, 1999; Dant et al., 2013;) can sometimes produce counter-productive results such as encroachment and the misuse of the franchise brand. Hence, we suggest the following hypothesis:

Hypothesis 4: *the greater the power distribution of franchisor to franchisee, the higher the franchisees' performance.*

Frequency of franchisor's visit to franchisee Franchisees are best described as being in "controlled self-employment" due to the operational restrictions imposed by the franchisor. This issue can reduce the failure rate of franchisees (Feistead, 1991). Furthermore, the franchisor controls the franchise system, brand name, marketing strategy and intellectual property by visiting their outlets regularly. As a result, franchisee can enjoy valuable experience from central franchisor and enhance franchisee's performance (Pandey and Wooldridge, 2003). Thus, we predict as following:

Hypothesis 5: *the frequency of franchisor's visit to franchisee increases, the performance of franchise organization will be enhanced*

Figure 1. Theoretical framework



3. Research Methodology

3.1 Data, sample

To test the proposed hypotheses, the data collected from 23 franchise organizations in the European countries (i.e, Austria, Belgium, the Netherlands and Germany) are used. Within each franchise chain, 10 franchisees have been investigated. With the agreement of franchisors, a questionnaire is mailed to all 450 franchisees located in these countries. Out of these, 241 completed questionnaires responded that represents a 53.55% response rate. Because of missing value of responded questionnaires, usable data on franchisee responses were available for 186 franchisees, which is equivalent to 41.33% of the original sample. Thus, the total observation in this study is 186 franchisees. We have six background variables relating to franchisee' performance, 13 attitude statements specifying franchisee's satisfaction towards franchise organization and four variables measuring performance.

Table A in Appendix summarized descriptive statistics of 13 franchisees' attitude statements. This data is used for factor analysis in the first step. We employ factor analysis to assess the structure underlying these attitude statements. After that, we apply hierarchical linear model. This paper specifies the two levels in the hierarchical structure for analyzing this data. At level 1 we have the franchisees. Then, in a two-level hierarchical structure, the franchisees are nested within franchise organizations. The top summary grid of Table in Appendix shows that there are 186 franchisees in 23 franchise organizations and there are a maximum of 13 franchisees in any franchise organization.

3.2 Variable and measure

To present a coherent research methodology, in this part we describe the concepts and display the measurement of variables that satisfy the objectives of this study. Regarding thirteen attitude statements, franchisee was asked to express their attitude related to franchise organizations from 1 to 5 scales (1 refers to "totally disagree", 2 relates "disagree", 3 confirms "neither disagree nor agree", 4 expresses "agree" and 5 refers to "totally disagree"). In addition, six background variables contain number of years' franchisee participating in the franchising system (*HISTORY*), number of full time employees (*NUMBFULL*), number of part time employees (*NUMBPART*), obligatory assortment (*OBLASSOR*), frequency of franchisor's visit to franchisee (*VISITS*) and distribution of power (*POWER*).

- *Number of years' franchisee in the franchising system* (age of franchisee) is the number of experienced years since franchisee has operated in the franchising system till the present time. It is measured as the number of franchisees' years existing in the franchising system.
- *Number of full time employees* (size of franchisee) is defined as number employees working full time in franchisees.
- *Number of part time employees* (size of franchisee) is defined as number employees working part time in franchisees.
- *Obligatory assortment* is what assortment is decided by central franchisor. It is measured by percentage of assortment is decided by franchisor.
- *Frequency of franchisor's visit to franchisee* is the number of franchisor' visiting times to franchisees. This variable is measured by four point scales (1 = weekly, 2 = monthly, 3 = per kwartaal, 4 = less than quarterly).
- *Distribution of power* is defined as delivery the decision making authority from franchisor to franchisee (Pandey and Wooldridge, 2003). This variable is measured as interval scale; it is evaluated with the three-point scale (from 1 to 3). The value equals 1 if franchisor most powerful, 2 is about equal, 3 if franchisee most powerful.

Our main dependent performance variables include overall grade for franchise chain (*OVERALL*), results compared to expectations (*EXPECT*), development of margins (*DEVMARG*), development of sales (*DEVSALES)*.

- *Overall grade* for franchise chain reflects the grade that franchisees obtain from their business operations. This variable is measured as point scale. It is evaluated from 1 to 10. The value is 1 if franchisees' performance is extremely bad, 10 if their performance is excellent.
- *Results compared to expectations* are the expectation of central franchisor from franchisees's performance. It is measured as point scale from 1 to 3. The value is 1 if franchisee's performance is above franchisor's expectation, 2 is about equal, 3 if franchisee's performance is below franchisor's expectation.
- *Development of margins* is defined whether franchisee's margin is improved or not. It is also measured with three point scales. The value is 1 if franchisee's margin is improved, value is 2 if it is about equal and 3 if franchisee' margin is not improved.
- *Development of sales* is defined whether franchisee's sale increases or not. It is also measured with three point scales. The value is 1 if franchisee's sale is increased, value is 2 if it is about equal and 3 if franchisee' sales is not increased.

3.3 Specification

In order to examine determinants of the performance of franchise organizations in retailing, we conduct two following stages.

3.3.1 Factor analysis

In the first stage, we apply factor analysis. Since the data employed contains four performance measures, six background variables, and 13 attitude statements, we can not put on these variables in the multilevel model. Therefore, we apply factor analysis to achieve data reduction by creating an entirely new set of attitude variables

much smaller in number to replace the original set of attitude variables with minimum loss of information (Hair et al., 2006; Lattin et al., 2003).

There are two types of factor analysis such as R factor analysis, analyzing relationship between variables, and Q factor analysis, analyzing relationship between cases (Hair et al., 2006; Lattin et al., 2003). In this research, the objective in the first step is to summarize the characteristics of franchisee attitudes; hence R factor analysis is applied. Moreover, factor analytic techniques can be implemented in either exploratory or confirmatory perspective (Hair, 2006; Lattin et al., 2003). The main aim in this first step in this paper is to re-express attitude franchisee data into small number of dimensions; therefore we apply exploratory factor analysis in this step. Furthermore, exploratory factor analysis distinguishes between common factor analysis and component analysis[1] (Hair et al., 2006; Lattin et al., 2003). Since the main objective in this step is to summarize most of original information (variance) of attitude variables in a minimum number of factors for prediction purposes in the second step, we decide to use principal component analysis.

In order to implement principal component analysis, following Hair et al. (2006) and Lattin *et al.* (2003), we apply the following steps:

- *Step 1:* check data including sample size, number of observations before performing factor analysis in order to check whether data is suitable for factor analysis (discuss in detail in the next section).
- *Step 2:* check when it is appropriate to use principal component analysis. We will base on variable correlation matrix, Bartlett's test of sphericity, KMO measure of sampling adequacy.
- *Step 3:* Deriving factors and assessing overall fit. In this stage we discuss which methods are applied to select numbers of factors (discuss in detail in the next section).

- *Step 4:* Interpreting the factors. In this stage, we will focus on examining factor loading matrix, choosing factor rotation methods, then identifying the significant loadings for each variable and then labeling the factors (discuss in detail in the next section).

In order to check robustness of Principal Component Analysis, we also apply Maximum Likelihood and Common Factor Analysis and compare these results with Principal Component Analysis method. After implementing the first step with component analysis, we will obtain factor scores. Hair el al. (2006) argue that factor scores are the best method for completing data reduction since they represent all variables loading on the factor. We will use these factor scores as independent variables in the multilevel model in the second step.

3.3.2 Hierarchical Linear model

After employing factor scores in the first stage, at the second stage, we apply hierarchical linear models (HLM) to analyse factors affecting the performance of franchise organizations in retailing. In particular, Maximum Likelihood estimators estimate the factors determining the performance of franchise organizations.

This method is applied because of two reasons. The first problem is statistical, if data aggregated; the result is that various data values from several sub-units are combined into fewer values for fewer higher-level units. As a result, much information will be lost, and the statistical analysis loses power. On the other hand, if data are disaggregated, the result is that a few data values from a small number of super-units are "blown up" into many more values for a much larger number of sub-units. The second problem encountered is conceptual. If the analysis is not very careful in the interpretation of the results, s/he may commit the fallacy of the wrong level, which consists of analysing the data at one level and formulating conclusions at another level. In deed, in the past such data were usually analyzed using conventional multiple regression analysis with one independent variable at the lowest level and a collection of

[1] See detailed discussion in Hair *et al*. (2006) p.141

explanatory variables from all variable level. Since, this approach analyses all variable data at one single level, it suffers from all of the conceptual and statistical problems mentioned above, whereas the hierarchical regression model overcomes these problems (Hox, 2002). Thus, we decide to use the multilevel model approach for analysing in this step.

To consider factors affecting the performance of franchise organizations, in this step we deals with the following four models

Model 1: Dependent variable is overall grade for franchise chain

$$Overal\lg rade_{ij} = \beta_{0ij} const + \beta_{1j} history_{ij} + \beta_{2j} numbfull_{ij} + \beta_{3j} numbpart_{ij} + \beta_{4j} oblassor_{ij}$$
$$+ \beta_{5j} visits_{ij} + \beta_{6j} power_{ij} + \beta_{nj} factors_{ij}$$
$$\beta_{0ij} = \beta_0 + u_{0j} + e_{0ij}$$

Note: β_{nj} reflects the number of coefficients of variables depending on how many factors have been recognized in the first step.

Model 2: Dependent variable is results compared to expectations

$$Expect_{ij} = \beta_{0ij} const + \beta_{1j} history_{ij} + \beta_{2j} numbfull_{ij} + \beta_{3j} numbpart_{ij} + \beta_{4j} oblassor_{ij}$$
$$+ \beta_{5j} visits_{ij} + \beta_{6j} power_{ij} + \beta_{nj} factors_{ij}$$
$$\beta_{0ij} = \beta_0 + u_{0j} + e_{0ij}$$

Model 3: Dependent variable is development of margins

$$Devm\arg_{ij} = \beta_{0ij} const + \beta_{1j} history_{ij} + \beta_{2j} numbfull_{ij} + \beta_{3j} numbpart_{ij} + \beta_{4j} oblassor_{ij}$$
$$+ \beta_{5j} visits_{ij} + \beta_{6j} power_{ij} + \beta_{nj} factors_{ij}$$
$$\beta_{0ij} = \beta_0 + u_{0j} + e_{0ij}$$

Model 4: Dependent variable is development of sales

$$Devsales_{ij} = \beta_{0ij} const + \beta_{1j} history_{ij} + \beta_{2j} numbfull_{ij} + \beta_{3j} numbpart_{ij} + \beta_{4j} oblassor_{ij}$$
$$+ \beta_{5j} visits_{ij} + \beta_{6j} power_{ij} + \beta_{nj} factors_{ij}$$
$$\beta_{0ij} = \beta_0 + u_{0j} + e_{0ij}$$

4. Empirical results

4.1 Principal Component Analysis Result

Assessing the Appropriateness of Factor Analysis

In order to check whether Principle Component Analysis is suitable, we implement some tests. First, checking the data, we have thirteen attitude statements and one-hundred and eighty six observations. Following Hair et al. (2006) rules, this data is sufficient to implement factor analysis. In addition, based on the correlation matrix of 13 attitude variables in the Table in Appendix, we find that most of variables in franchisees' attitudes are substantially and highly significantly correlated. Particularly, 53 of 78 correlations (68.0 percent) are significant at 1 percent level. Moreover, KMO (Kaiser-Meyer-Olkin) measure of sampling adequacy equals 82.8 percent. Furthermore, the Bartlett test of sphericity is statistically significant at 1.0 percent level. These results support that the degree of inter-correlations among the attitude variables is good enough to continue the principal component analysis (Hair et al., 2006).

Deriving Factors and Assessing Overall Fit

Following Hair et al. (2006) and Lattin et al. (2003), we apply different criteria for extracting the number of factors.

- **Latent Root Criteria**

The first criteria, we use the eigen value. The rationale for the latent root criterion is that any individual factor should account for the variance at least a single variable if it is to be retained for interpretation. With the component analysis, each variable contributes a value of 1 to the total eigenvalue. Thus, only the factors having latent roots or eigenvalues greater than 1 are considered significant (Hair et al., 2006). Based on eigenvalue, we decide to extract three factors out of 13 attitude variables.

- **Scree Test**

Moreover, in order to make robustness decision of the number of factors, we also use other criteria. Second, we apply the Scree test. Since with the component factor analysis, the later factors extracted contain both common and unique variance. Although, all factors contain at least some unique variance, the proportion of unique variance is substantially higher in later factors. The Scree test is used to identify the optimum number of factors that can be extracted before the amount of unique variance begins to dominate the common variance structure. Based on the shape of resulting curve in Scree test, we conclude that there are three factors which can be extracted.

- **Parallel Analysis**

In addition, we also look at parallel analysis (Keeling formula). Based on Keeling result, three factors are selected.

In general, the results in eigenvalue rule, Scree test and parallel analysis support for the final decision to extract three factors out of 13 attitude variables. However, we also check communalities, representing the amount of variance accounted for by the factor solution for each variable (Hair et al., 2006). Based on the rules in Hair et al. (2006), all variables with communalities less than .5 are not sufficient explanation. We find that attitude variable 5, 7, 9, 11, 13 have communalities less than .5. However, the attitude variable 11 (*Franchisor insufficiently consults franchisees)* has small community (approximately .38), and this variable does not seem important in this case, we decide to exclude attitude variable 11 when using component analysis. Although attitude variables 5, 7, 9, and 13 have communalities approximately less than .5, these variables are important to analyze, so we decide to keep these variables. By re-specifying the Principle Component Analysis excluding attitude variable 11, we obtain the same results with three factor discussed above. However, the explained total variance now increases from 52.4 percent (will full 13 attitude variables) to 54.1 percent. This result supports for the exclusion of attitude variable 11.

Interpreting factors

So far, we achieve the extracted three factors which represent the entire set of 12 attitude variables. Although, initial unrotated factors obtain the objective of data reduction, these results are difficult to interpret. Therefore, we need to employ a rotational method to achieve simpler and theoretically more meaningful factor solutions. The ultimate effect of rotating the factor matrix is to redistribute the variance from earlier factors to later ones to obtain relative less high loadings per factor (Hair et al., 2006). There are two types of factor rotation methods: orthogonal and oblique factor rotation. In this paper, we apply both of these methods and evaluate whether the results are different or not. In the orthogonal factor rotation, the rotation of factor axes is needed to maintain at 90 degree angle. The oblique rotational method is more flexible since the rotation of factor axes does not need to be orthogonal. In practice, the main objective of all methods of rotation is to simplify the rows and columns of the factor matrix to facilitate interpretation.

First, we apply Orthogonal Rotation Methods. There are three major orthogonal approaches such as Quartimax, Varimax and Equimax[2]. Among these approaches, Varimax method is considered to give a clearer separation of the factors (Hair et al., 2006). Moreover, the Varimax approach has proved successfully as an analytic method to obtain an orthogonal rotation of factors (Hair et al., 2006). Therefore, we decide to use Varimax approach in orthogonal rotation method.

In interpreted factors, a decision must be made regarding the factor loading worth consideration and attention. Because a factor loading is the correlation of the variable and the factor, the squared loading is the amount of the variable's total variance accounted for by the factor (Hair et al., 2006). The result in the Table 1 of factor loading shows that attitude variables 2, 8, 4, 1, 7 and 5 are statistically significant for factor 1 since factor loadings are in the range from 0.78 to +0.63. Attitude variables 2, 12, 10, 9 and 13 are statistically significant for factor 2 with factor loadings in the range from + 0.68 to + 0.60. Attitude variable 3 and 6 are statistically significant for factor 3 with factor loadings ranging from +0.70 to + 0.63.

Table 1. Factor analysis of multi-item attitudes

Attitude variables	Factor 1	Factor 2	Factor 3
Satisfied with franchisor	**0.790**		
Franchisor-owned outlets well organized.	**0.742**		
Services delivered by franchisor very good	**0.712**		
Satisfied with entire franchise formula	**0.690**		
Franchisor communicates often enough	**0.644**		
Franchisor communicates very well	**0.634**		
Franchise contract unbalanced wrt power		**0.678**	
Distribution decisions lead to conflicts		**0.663**	
Franchisor too much focused on problematic franchisees.		**0.612**	
Decisions on assortment lead to conflicts		**0.609**	
Visits by franchisor to franchisee ok			**0.693**
Franchise formula meets market requirements			**0.671**
Eigenvalue	4.011	1.397	1.093
Percentage of variance explained	26.689	15.407	12.085
Cumulative percentage of variance explained	26.689	42.096	54.181

Note: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization

Overall, factor 1 contains most variables which describe satisfaction of franchisees to franchisors such as formula, services, communication. Therefore, we can label factor 1 as satisfaction with franchisors' characteristics. Factor 2 contains most of factors represent attitude towards the conflicts between franchisors and franchisees. Hence, this factor can be labeled as attitude towards conflicts between franchisors and franchisees. Factor 3 represents the satisfactoriness about concerns of franchisors. It can be labeled as attitude toward concerns of franchisors. In addition, using Varimax approach in orthogonal rotation method, we also apply Quartimax and Equimax approaches in orthogonal rotation method. The obtained results are relatively similar with Varimax approach. Moreover, we also apply oblimin in oblique rotation method, based on structure matrix; we obtain three factors similar the result discussed above in varimax approach in orthogonal rotation method but with slightly higher factor loading.

[2] See Hair (2006) p. 150 for detailed discussion

Furthermore, we also apply Maximum Likelihood method to extract factors. However, comparing to Principal Component Analysis, the communalities of most variables are much smaller. Moreover, based on the eigenvalue, we also get three factors but the explained cumulative percentage of variance of three factors now is only 39 percent. Therefore, we conclude that Maximum Likelihood method is not good as Principal Component Analysis to extract factor in this study. Moreover, we also apply Common Factor Analysis method to extract factors. However, comparing to component analysis, the communalities of many variables are much smaller than 0.5. Although based on the eigenvalue, we also obtain three factors, the explained cumulative percentage of variance of three factors now is only 38.8%. Therefore, we conclude that Common Factor method is not good as Principal Component Analysis to extract factor in this study.

4.2 Hierarchical Linear Model Result

4.2.1 Statistic Description and Correlation

Table 2 shows mean, standard deviation and the statistical significant relationships between the dependent and independent variables. First, overall grade for franchise chain is significantly associated with number of full time employees, satisfaction of franchisor *(factor 1)*, attitude toward conflict between franchisees and franchisors *(factor 2)*, attitude toward concerns of franchisors *(factor 3)* at 1 percent of significant level; 5 percent for percentage obligatory assortment, distribution of power and 10 percent for number of part time employees. Second, there is also a significant relationship between the results compared to expectations and satisfaction of franchisor *(factor 1)* at 1 percent level; 5 percent for number of part time employees and distribution of power; 10 percent for number of full time employees. Third, development of margins also has strong relationship with attitude toward concerns of franchisors *(factor 3)*, satisfaction of franchisor *(factor 1)*, number of full time employees, and distribution of power at 1, 5 and 10 percent of significant level, respectively. Finally, development of sales has significantly associated with distribution of power, satisfaction of franchisor *(factor 1)* and number of years' franchisee of this chain at 1, 5 and 10 percent level, respectively. Moreover, Table 2 shows that number of full time and part time employees has high correlated with together at 5 percent of significant level (0.82). It implies that multicolinearity problem may appear if we include simultaneously both the variables in the hierarchical model. Therefore, in this study, we decided to only include "number of full time employees" in our analysis since this variable exactly reflects the stability in employing employees at franchisees.

Table 2. Descriptive statistics and correlation

Variables	Mean	S.D	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Overall grade for franchise chain	7.30	1.13	1												
2. Results compared to expectations	1.82	0.77	-0.317**	1											
3. Development of margins	1.78	0.74	-0.215**	0.054	1										
4. Development of sales	1.68	0.81	-0.146*	0.132*	0.247**	1									
5. Number of years franchisee of this chain	6.12	5.77	-0.064	0.033	0.142^{+}	0.102	1								
6. Number of full time employees	2.17	4.13	0.160**	-0.142^{+}	-0.057	-0.013	0.107	1							
7. Number of part time employees	1.55	3.75	0.137^{+}	-0.188*	-0.105	-0.005	-0.008	0.820**	1						
8. Percentage obligatory assortment (by the franchise chain)	90.2	13.4	0.175*	-0.093	-0.017	0.126^{+}	-0.177*	-0.006	0.042	1					
9. Frequency of visits franchisor to franchisee	2.61	0.75	-0.113	-0.011	0.015	0.091	0.164*	0.078	0.070	-0.172*	1				
10. Distribution of power	1.65	0.69	0.226*	-0.148*	-0.133^{+}	-0.200**	0.054	0.078	0.078	-0.260**	0.037	1			
11. Satisfaction of franchisees *(factor 1)*	0.00	1.00	.624**	-0.310**	-0.147*	-0.165*	-0.107	0.079	0.057	0.125^{+}	-0.090	.132^{+}	1		
12. Attitude toward conflict between franchisees and franchisors *(factor 2)*	0.00	1.00	-0.206**	-0.039	0.218**	0.035	0.178*	-0.165*	-0.171*	-0.015	0.160*	-.152*	0.000	1	
13. Attitude toward concerns of franchisors *(factor 3)*	0.00	1.00	0.254**	-0.025	0.020	0.005	-0.022	0.067	0.117	0.038	-0.011	.135	0.000	0.000	1

***, *, + indicate significance level at the 1%, 5% and 10%, (2-tailed), respectively.*

4.2.2 Discussion of Hierarchical Linear Model Results

The results of Hierarchical Linear Model are disclosed in Table 3. We apply four multilevel models with dependent variables including overall grade for franchise chain, results compared expectations, development of margins and development of sales, respectively in order to determine factors affecting performance of franchise organizations.

Table 3. The results of the multi-level linear models

Variables	Model 1	Model 2	Model 3	Model 4
Fixed component				
Constant	6.035**	2.701**	1.787**	0.732
	(0.480)	(0.506)	(0.487)	(0.543)
Number of years franchisee of this chain	0.010	0.004	0.021^{+}	0.017^{+}
	(0.009)	(0.010)	(0.012)	(0.010)
Number of full time employees	0.015	-0.023^{+}	-0.003	0.007
	(0.013)	(0.013)	(0.015)	(0.013)
Percentage obligatory assortment (by the franchise chain)	0.010*	-0.006	0.002	0.007^{+}
	(0.004)	(0.004)	(0.003)	(0.004)
Frequency of visits franchisor to franchisee	-0.036	-0.029	-0.082	0.195*
	(0.069)	(0.073)	(0.080)	(0.086)
Distribution of power	0.195*	-0.164^{+}	-0.106	-0.148
	(0.081)	(0.085)	(0.078)	(0.095)
Satisfaction of franchisees *(factor 1)*	0.666**	-0.207**	-0.117*	-0.195**
	(0.052)	(0.054)	(0.049)	(0.059)
Attitude towards conflict between franchisees and franchisors *(factor 2)*	-0.205**	-0.064	0.104*	-0.050
	(0.053)	(0.056)	(0.048)	(0.047)
Attitude towards concerns of franchisors *(factor 3)*	0.259**	0.005	0.026	0.003
	(0.051)	(0.053)	(0.047)	(0.058)
Random component				
σ_e^2	0.460	0.510	0.390	0.439
	(0.001)	(0.053)	(0.047)	(0.057)
σ_{u0}^2	0.000	0.000	1.745	0.476
	(0.000)	(0.000)	(1.319)	(0.249)
σ_{u1}^2	0.000	0.000	0.001	0.000
	(0.000)	(0.000)	(0.001)	(0.000)
Deviance	441.7	402.8	364.6	402.3

***, *, + indicates significance level at the 1%, 5% and 10%, respectively.*

Drivers of franchisee performance

Based on literature, eight variables are candidate determinants of franchise performance. The first determinant is *the number of years* which franchisees participate in this franchise system. This variable is not statistically significant in the first two models but significant at 10% level in model 3 and 4. This result is contradicted to our expectations (*Hypothesis 1*) since the longer years franchisees participated the less improved they obtain in their margins and sales.

Regarding *number of full time employees* participating in franchise organization, this variable is only statistical significant at 10 percent level in model 2 and has negative relationship with "results compared expectations". This result is not contradicted to previous literature. Because the higher number full time employees work in franchise organization, the higher results of performance excess expectations. This result also support for our Hypothesis 2 and previous literature.

Percentage of obligatory assortment has mix effects to franchise performance; this variable is positively significant only in model 1 and model 4 at 5 percent and 10 percent level, respectively. As

discussed in literature above, the higher percentage of the assortment is decided by the central franchisor, the better performance of franchise organization. Our result support for this argument (Hypothesis 3) in model 1, because the higher obligatory assortment can help franchisors maintain requirements to franchisees to pursue public's good will towards the franchisor's brand by providing high quality goods and services (Fenwick and Strombom, 1998). However, the result in model 4 shows that, the higher percentage of obligatory assortment decreases the improvement of sales in franchisee's operations.

Frequency visit of franchisor to franchisees have modest effect in our models. This variable is only positively statistically significant in model 4 at 5% level. This result is contradicted with our expectation (Hypothesis 4) and previous research. The more frequency franchisors visit franchisees, the less improvement in sales. One reason explaining for this case is that the more frequency visits of franchisors lead to higher probability loss control of franchisees. Under circumstances, the franchisors involve intensively in franchise organizations. Franchisees are not easy to make their own business decision and then this leads to decrease in sales.

Distribution of power between franchisors and franchisees has both negative and positive effect to performance. However, this variable is only positively statistically significant in model 1 at 5%. The higher distribution power towards franchisees leads to higher grade of franchise performance. Our results support for our expectation (Hypothesis 5) and previous research. The more distribution of power of franchisors to franchisees, the greater franchisee satisfaction (Hunt and Nevin, 1974), then leads to higher overall grade of performance.

The *satisfaction of franchisees to franchisor characteristics* has strongly impact to franchise performance in general and franchisee operation in particular. This variable is obtained by Principal Component Analysis and achieved satisfactory scores. This variable is statistically significant at 1 percent and 5 percent level in all four models. In model 1, this variable has positive impact to overall grade of franchise performance. In the rest three models, this variable has negative impact on results toward expectations, development of margins and development of sales. However, these results are not contradicted each other. In model 1, the higher satisfaction of franchisees to franchisors' characteristics leads to the greater overall grade of performance. In model 2, the increasing satisfaction of franchisees to franchisors' characteristics leads to the performance excess the expectation. In model 3, the greater satisfaction of franchisees to franchisors' characteristics results in the improvement of margins. In addition, model 4 shows that, the higher satisfaction of franchisees to franchisors' characteristics improves the development of sales. Our results support for previous literature that when franchisees satisfy with franchisors' characteristics such as formula, delivery, communication, and so on, it is easier for franchisees to contribute to the franchise performance (Dant and Gundlach, 1999; Frazer el al., 2007).

The franchisees' attitude towards conflict between franchisors and franchisees variable is also obtained from Principal Component Analysis. This variable has negatively statistical significance at 1% level in model 1 and positive significance at 5% in model 3. Model 1 shows that conflict between franchisors and franchisees decreases the overall grade of performance. The result in model 3 also shows that conflicts decrease the development of margins. Conflicts between franchisors and franchisees contain main reasons such as: conflict of distribution power, decision of assortment, and so on. Therefore, in order to improve franchise performance, franchisors need to pay attention to reduce the conflict with franchisees.

Finally, the satisfaction of franchisees to franchisors' concerns is only positively statistically significant at 5 percent level in Model 1. This result shows that the more attention franchisor focuses on franchise operations, the higher results of franchise performance.

5. Discussion, Conclusion, Implications and Further Research

Factor analysis is a useful methodology to assess the structure underlying the attitude statements from franchisees. In this paper, we employ Principal Component Analysis since the main objective in the first step is to summarize most of original information of attitude variables in a minimum number of factors for prediction purposes in the second step. Based on factor analysis, there are three franchisee attitudes generally affecting the franchise performance including satisfaction of franchisor's characteristics, attitudes towards conflicts between franchisors and franchisees and satisfaction of franchisor's concerns.

Apart from Principal Component Analysis, we also apply other method such as Maximum Likelihood and Common Factor Analysis to extract number of factors. However, we find that the particularly evident when comparing the eigenvalues, the scree test, the parallel analysis, the communalities, the total explained variance results in these methods, the Principal Component Analysis provides the best results of factor analysis in this our case.

Regarding results in the Hierarchical Model, we find the same similar result with Gassenheimer et al. (1996), since there was negative relationship between franchisee performance and number of years of franchisee in the franchise system. In our case, the longer year's franchisees participated in franchise chain decrease their improvement of margin and sales. Moreover, supporting for Castrogiovanni et al. (1993) argument, we find the result that the higher number of full time employees working in franchisees the better results of franchisee performance. We find the mix results in percentage of obligatory assortment. Our results are similar to current debates in this issue since some research claim that the higher percentage of obligatory assortment of franchisor to franchisee is good for franchise performance but some do not agree with this argument. Similar to findings of Frazer et al. (2007) and Coughlan et al. (2001), we find the evident the greater the power distribution of franchisor to franchisee, the better the franchisees' performance. In contrast to prior research (Feistead, 1991), we find that the more frequency franchisor visits franchisee, the less improved franchisee' development of sales.

So far, we have discussed some factors influencing franchise performance. In sum, in order to improve franchise performance, franchisors need to pay attention more on their characteristics such as communication, delivery, and so on to satisfy franchisees. Moreover, the conflicts regarding to contracts, power distribution, business control between franchisors and franchisees are inevitable. Therefore, in order to improve franchise performance, franchisors need to consider the distribution of power to franchisees, the contract establishment and so on to reduce the conflicts. Regarding other determinants, our results are similar in current debates in literature. We can not give clear suggestions to franchisors and franchisees but these factors such as history of franchisee, number of employees, percentage of obligatory assortment, and frequency visit of franchisors are considerably important factors in determining franchise performance. Franchisors need to take into account to these factors when evaluating franchisee's performance.

This study evaluates franchise performance by determining factors affecting the franchisees' performance. With the emergence of franchisors in the global economy, there is also a need to implement additional study which will focus on franchisor's performance. This will also help resolve differences in findings between franchisor and franchisee performance. Moreover, further research may apply different methodology to determine factors influencing franchise performance.

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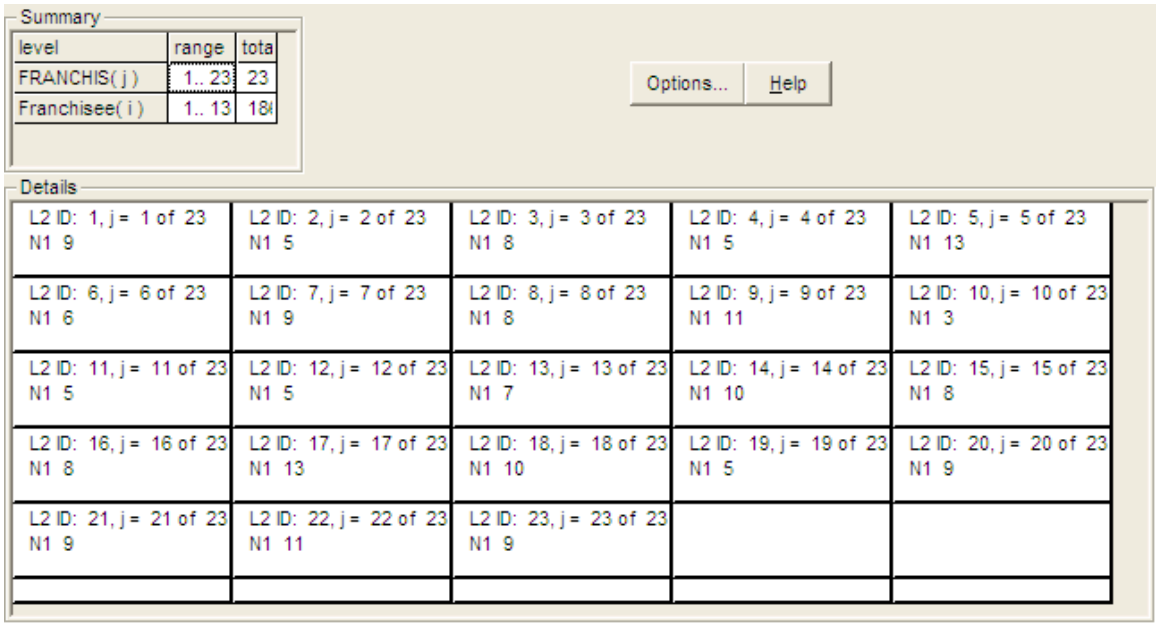
Appendix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