Multi-Level Analysis of Salesperson Performance Determinants

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Abstract

This research develops a two-level model based on hypotheses, which concern relationships among role ambiguity, role conflict, job involvement and salesperson performance at individual level and collective sale self efficacy, customer orientation and competitive climate at sale unit level in Iranian food industry. Data was drawn from 482 sales people in 30 companies , using a 51-item self-reported questionnaire. Research model was tested in disaggregation, aggregation and multilevel approaches. The results from three approaches were different. Multilevel modeling analysis revealed that role ambiguity and role conflict have negative effects, but collective sale self efficacy and job involvement have positive effects on sales person performance. Results also showed that collective sale self efficacy has positive moderation effect on the relationship between job involvement and sales person performance. Collective sale self efficacy indicated positive moderation effect on the relationship between job involvement and sales person performance and negative moderation effect on the relationship between role conflict and sales person performance.

Keywords: Job Perception, Sales Unit, Performance, Multi-level.

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1. Introduction

Among the vital objectives of organizations is to gain interest from sales of products, as well as services of markets. In this regard, sales person plays a crucial role in firm success (Yammarino and Dubinsky, 1990). Since improving the sales person performance has a great portion in increasing the market share, as well as sales, therefore, any activities in this regard is considered as a goal for top managers. In addition, many researchers are highly interested in the presented field. For this reason, during recent decades, numerous studies were carried out on the effective factors, which affect the performance of sales person. However, such studies are also progressing. It is worth to mention that not only these studies are not convergent, but also the correlation between the mentioned factors with sales person performance essentially differs from one to another (Churchil et al., 1985). Sales person affected by organizational variables could be considered as a part of organizations. Organizational variables are constant inside an organization, while differ throughout the other ones (size and cohesion) (Davison et al., 2002). Haffman believes in the

hierarchy and multi-level essence of organizations (Hoffman, 1997). According to the essence of organization hierarchy, the variables in each layer affect each other. Due to the hierarchical nature of the organizations, the collected data will also have hierarchical nature. Therefore, traditional approaches could not result in suited consequences and there still exists a high need to hierarchy analysis approach. A major portion of organizational research models include numerous variables performed at different stages of the organization, thus, for multi-level hypotheses, researchers are obligated to focus on variables with more levels (House et al., 1995). The weakness of most studies, carried out in sales person performance, is the lack of correct attention to the considered issue; thus, the related studies are commonly single level. However, application of multilevel hypotheses in some issues such as education and sociology, as well as business, has shown an increasing trend (Klein et.al, 1994; Rousseau, 1985). Studies carried out regarding sales person performance and identification of effective factors were almost done ignoring construct levels. In

organizational studies which are essentially based on hierarchical data, aggregating approach, disaggregating approach and multilevel/hierarchical approach are applied to test the models. To confront with organization phenomena, which include variable levels of organization, the three mentioned approaches are highly applicable. Meanwhile, study of organizational variables in each approach may lead to different results. For instance, in rare multi-level studies about effective factors in sales person performance, Feltcher et al., (2007) found that sales person competitiveness could not play a key role in the considered field. Though, Wang and Netemeyer (2002) believed that sales person competitiveness affect a remarkable positive impact on sales person performance in single level approach (b=0.30; p<0.05). In terms of the effect of organizational commitment on citizenship behavior, Miao (2007) and Piercy et al., (1999) reported a significant positive effect (b=0.12, p<0.05) and a positive effect (b=0.18, p<0.05), respectively. However, through a similar study, Miao found no relationship between organizational commitment and citizenship behavior in

two level analysis (b=0.06). Results show that multi-level approach is an evitable tool in organizational analysis and investigation of direct effects of organizational variables. Otherwise, results of the analysis would be misleading.

"Self-efficacy means believing in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1977; Schunk1991). Self-confidence along with belief to the individual abilities plays an inevitable role in increment of individual, as well as collective performance. Self-efficacy is among the effective organisms of human performance emphasized in experimental researches. Regarding self-efficacy, two vital subjects are considerable (Azizi, 2007): Firstly, general self-efficacy, secondly, domain specific self-efficacy. The mentioned state is also visible in other behaviors such as innovativeness (Goldsmith et.al, 1998). General self-efficacy pinpoints the individual belief towards achieving the goal collectively, whereas domain specific self-efficacy includes individual belief towards successful fate of a particular work such as internet self-efficacy (Ma, 2005) and

computer self-efficacy (Marakas et al., 1998). In second step, self-efficacy appears in both individual and collective levels. The latter is mostly discussed in organizational sets. Therefore, in spite of field studies in psychology, as well as sociology, there exists no study regarding the effect of collective self-efficacy of sale on sales person performance.

2. Hypothesis Development

− **Individual Level Factors**

− **Role ambiguity**

Role ambiguity occurs when individuals lack a clear definition of their role expectations, and the requirements/methods to complete their job tasks (Rizzo et al., 1970). Role ambiguity in word means lack of sufficient perception of information required for appropriate performance of sales person (Singh, 1998). Uncertain policies of the organizations along with ambiguity of responsibilities result in role ambiguity for sales persons. Unanimously, researchers claim that ambiguity plays a more effective role rather than conflict in making role stress (Fisher and Gitelson, 1983; Rizzo et al., 1970). Role ambiguity increases the unsatisfactory towards job and

then decreases the performance (Rizzo et al., 1970). According to the previous studies, one can conclude that if the sales personsales person has not sufficient information regarding him/her role, expectances, as well as the procedure of achiving the expectances, then, he/she would not be able to orient the activities and attempts and consequently the performance level is expected to be decreased.

Hypothesis 1. There is a negative relationship between sales personsales person role ambiguity and performance.

− **Role Conflict**

Role conflict means the incompatibility of requirements and expectations from the role, where compatibility is judged based on a set of conditions that impact role performance.

(Rizzo et al. 1970). Behrman and Perreault (1984) believed that role conflict includes the incompatibility of expectances with the related role. Conflict may occur in satisfying customers, as well as company. Because, customers normally seek the credit conditions, price, as well as services which are not easily accessible for company. Result collected in regard to the

effect of role conflict on sales personsales person performance showed incompatible consequences. For instance, some studies (Lysonski, 1985; Sohi 1996) found a negative effect; some other reported a positive effect (Behrman and Perreault 1984; Michaels et al., 1987) and the other one found no effect (Grant et al, 2001). The difference between results may be resulted due to considering the performance as whole. Performance has two main parts: behavioral performance and output performance. Because in spite of an insignificant part of sales personsales person performance, a great portion is directly affected by variables which are not controllable by sales personsales person (Miao and Evans, 2007). If the sales personsales person confronts with different expectances, usually in conflict with each other, it might decrease the motivation, as well as intellectual focus and consequently the performance for sales personsales person.

Hypothesis 2. There is a negative relationship between sales person role conflict and performance.

− **Job Involvement**

Job involvement is the degree to which one is cognitively preoccupied with, engaged in, and concerned with one's present job (Paullay et al., 1994, p. 225). In this regard, job involvement could be defined as psychological identity of individuals towards their job (Kanungo, 1982). Holmes and Srivastava (2002) studied the indirect effect of job involvement on sales person performance using smart work and found a positive effect. Using longitudinal studies, Rotenberry and Moberg, (2007). demonstrated that individuals with high job involvement gain a high performance rank from their manager. As mentioned earlier, job involvement indicates the individual enthusiasm and concern towards their job. Hence, a sales person who shows higher involvement attempts to find and apply new tools and methods for doing the job. These can result in his/her performance improvement.

Hypothesis 3. There is a positive relationship between sales person job involvement and performance.

− **Sales Unit Factors**

− **Collective Sale Self-Efficacy**

Collective self-efficacy means common belief of a group towards their unit capabilities applied to organize the required activities (Bandura, 1997, p.476). Thus, based on such a definition, collective sale self-efficacy can be defined as the belief of the members of a sale unit as an integrated omplex regarding the capabilities of the members towards achieving the predefined sale targets and fixing all the problems confronted with. Gully et al. (2002) by an extra-analysis found a positive significant relationship between performance of sales people and collective self-efficacy. Klimoski and Mohammed (1994) demonstrated that if members of a group own an efficient comprehension of the whole group, then performance of the group members would be closely affected.

Hypothesis 4. There is a positive relationship between collective sale self-efficacy with sales person performance.

High collective sale self-efficacy demonstrates a remarkable belief of the members regarding the success of the sale unit in reaching the defined goals. By boosting the job attempt, it could reduce the negative effect existing between role conflict, as well as ambiguity and sales person performance.

Hypothesis 5. The relationship between sales person role conflict and performance in sale units with high collective self efficacy is less than sale units with lower collective self efficacy.

Hypothesis 6. The relationship between role ambiguity and sales person performance in sale units with high collective self efficacy is less than sale units with lower collective self efficacy.

If sales person shows a very great interest to his/her job, then the attempts toward finding creative procedures for effective sale would be increased. At the same time, a remarkable collective sale self-efficacy of sale unit may increase the job creativities, as well as attempts. And then, performance would be boosted.

Hypothesis 7. Relationship between sales person role involvement and performance is stronger in sale units with high collective sale self-efficacy,compared to those with low collective sale self-efficacy.

− **Competitive Climate**

Competence for organizational awards and credit as well as life survival is considered

as an appropriate tool applied to induce the sales person motivation (Churchill et al., 1997). Brown et al. (1998) declared that psychological competitive climate is a climate in which employees believe that organizational award closely depends on their prior performance, compared to other employees. Using study of 916 employees of IT, Fletcher et al. (2007) found that collective competitive climate influences the relationship between personal competitiveness and sales person performance. Competitive climate indirectly influences the sales person performance by relying on definition suited objectives. Increasing competence in sale units makes individuals improve their performance due to internal motivations (manifest the preference senses) along with external motivations (job promotion and financial awards).

Hypothesis 8. There is positive relationship between competitive climate of sale unit and sales person performance.

When sales person confronts with a highly competitive climate in sale unit, he/she continuously attempts to improve the job activities. Otherwise, in case of role conflict, the sales person would be touched with stress pressure, as well as amazing work atmosphere. The mentioned climate along with frequent comparison in performance of sales people declines the performance. In fact, throughout a hot competitive climate in sale units, negative effect of role ambiguity, as well as conflict would also be boosted consequently.

Hypothesis 9. A highly more negative relationship exists between sales person role conflict and performance within sale units in high competitive climate compared to sale units in low competitive climate.

Hypothesis 10. The relationship between sales person role ambiguity and performance showed a more negative level in high competitive climatse rather than low competitive ones.

Essentially, competitive climate creates a motivation for sales people to promote their performance. However, in the high competitive climate and high role involvement, sales person appears to havea relatively higher interest to the job. Hence, competitive climate plays as a positive moderator between role involvement and sale performance.

Hypothesis 11. The relationship between role involvement and sales person

performance is more positive in sale units with high competitive climate in comparison with sale unit with low competitive units.

− **Customer Orientation**

Customer orientation is defined as a part of a more extended definition, i. e. market orientation. In marketing literature, market orientation is essentially based on the concepts presented by Narver and Slater (1990) and Kohli and Jaworski (1990). Customer orientation follows variable analytical levels, including sales person, as well as organizational level. Customer orientation is more related to sales person in organizations, due to direct connection between customers and sales people. Boels et al. (2001) investigated 271 sellers using structural equations and found that there is a positive relationship between sales person customer orientation and sales person performance. Cross et al. (2007) also found such a result. Then, one can say that, if customer orientation increases, sales person performance would also increase.

Hypothesis 12: There exists a positive relationship between customer orientation and sales person performance in organization.

The higher the customer orientation, the more attempts would be focused on the customers needs and wants. Therefore, sales person performance would be easier with more appropriate guides in regard to sale strategies. As a consequence, negative effects of role conflict as well as ambiguity decrease, so that positive effect of role involvement would be suppressed.

Hypothesis 13: The relationship between sales person role conflict and performance in sale units with high consumer orientation is lower rather than sale units with low consumer orientation.

Hypothesis 14: The relationship between sales person role ambiguity and performance in sale units with high consumer orientation is lower rather than sale units with low consumer orientation.

Hypothesis 15: The relationship between sales person performance and job involvements in sale units with high customer orientation is stronger than that of sale units with low customer orientation.

3. Methodology

The population for the study includes the Iranian food industry. Reasons for the selection of such an industry are: huge

number of companies, high competitive climate; relative advantage of Iran in the mentioned industry.

Amongst the active companies, those which own independent and direct sale units are preferable. However, sale system of Iran relies on producer companies or distributer ones or the companies which sell their products themselves. Majority of the companies use the distribution companies' services. 600 questionnaires were prepared for 33 active companies. Of the studied companies, three have stopped cooperation at the beginning. Under supervision of researchers, 398 and 116 questionnaires (86% of the whole questionnaires) were filled and returned during first and second weeks, respectively. Then, of the 514 questionnaires, 32 have been omitted due to lack of proper data and other questionnaires

were analyzed. For fulfilling the prepared questionnaires, self-reporting method has been applied. Therefore, in the current study, 482 sales people and 30 sale unites were studied. To study the special and demographical variables, 47 and 4 questions were asked, respectively. The whole special questions were qualified according to Likret 7 point's spectrum. In multi-level studies, it is necessary to distinct between construct level and measurement level for data collection. Construct level is considered as the level in which the empirical pattern is displayed (Klein and Kozlowsky, 2000, p.27). In this regard, level of measurement is applied as a level in which data is collected to measure the related construct (Klein and Kozlowsky, 2000, p.32).

Table 1: Research Constructs Specifics

Construct	Source	No of items	α	Aggregation	Construct Level	Measuring Level
Job Involvement	Kanungo, 1982	10	0.79	no	Individual	Individual
Role Ambiguity	Rizzo et al. (1970)	6	0.86	no	Individual	Individual
Role Conflict	Rizzo et al. (1970)	8	0.79	no	Individual	Individual
Performance	Behrman and Perreault (1982)	6	0.78	no	Individual	Individual
Competitive Climate	Brown et al. (1998)	4	0.73	yes	Sales unit-shared	Individual
Customer orientation	Narver and Slater (1990)	6	0.88	yes	Sales unit-shared	Individual
Collective Sale Self-efficacy	Author	7	0.70	yes	Sales unit-shared	Individual

4. Analysis

A sample demographical descriptive analysis demonstrated that about 92. 5 % of respondents are men and the rest (7.5 %) are women. Thus, one can conclude that selling the food products is mostly expected as a male job. Amongst the respondents about 90% are less than 35 years old and only 10% are more than 35. Hence, in such an industry, younger people are more attracted. In regard to academic education, just 20% had academic educations and the other 80% owned diploma or lower. Of the studied population, 60% and 40% are married and single, respectively.

Disaggregation Approach

Disaggregation analysis is a method applied to analyzing the hierarchical data, in which data of one level are included in another level, influenced by the higher level. In a unilevel approach, it is suggested to study the data essentially in a sole level (individual and sales person or sale unit level). In such an approach, a lower level, where n_1= 482, is considered and moderated regression analysis is applied, whereas effects of second or higher levels (n_2=30) are not considerably focused and researcher provides as many variables as sales person (n_1=482). Varieties happened due to difference among the groups (second

level/ sale unit) is removed and statistical accuracy decreases.

Results of moderated regression showed that job involvement plays a positive role (b=0.338; p<0.01) on sales person performance, while role conflict (b=-0.135; p<0.01), as well as role ambiguity (b=-0.147; p<0.01) affects the studied factor in a negative way. Third step did not show any significant relationship between role concepts with performance. Completely in line with the previous step, results of forth step demonstrated that competitive climate has no key effect on the relationship between three role concepts and performance. In addition, in the next step, it has been shown that customer orientation has no considerable effect on the relationship of the mentioned role concepts and performance.

Table 2: Multiple Moderated Regression result- Disaggregation Approach (n=482)

Variable	Step1	Step2	Step3	Step4	Step5
JI	0.338^c				
RA	-0.147^c				
RC	-0.135^c				
SSE		0.138^b			
CO		0.091			
COCL		-0.093			
JI×SSE			0.027		
RA×SSE			0.031		
RC×SSE			-0.007		
JI×COCL				-0.031	
RA×COCL				0.059	
RC×COCL				0.037	
JI×CO					-0.096
RA×CO					-0.014
RC×CO					0.022
R2	0.094	0.129	0.132	0.134	0.14
Δ R2	0.094	0.035	0.003	0.003	0.006
ΔF	15.577	6.015	.435	0.438	0.986
Sig. ΔF	0.000	.001	0.728	0.726	0.399

a=p<0.1; p=P<0.05; c=p<0.01

The following figure is represented based on the results of moderated regression

shown in the previous table.
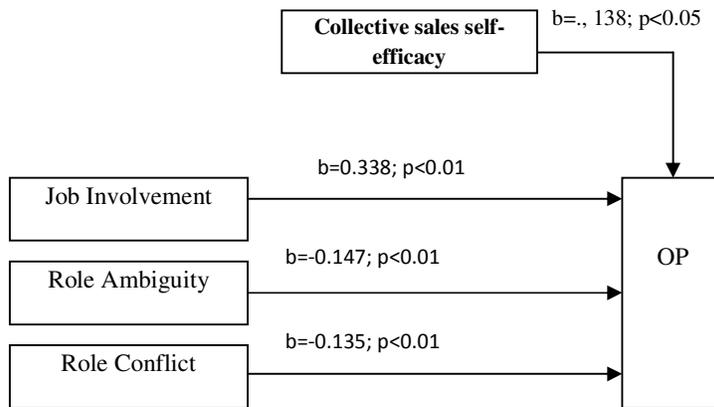
Fig 1: Tested Model in Disaggregation Approach

As seen in this figure, sale self-efficacy has an effective direct effect on sales person performance, whereas the two other variables (customer orientation and competitive climate) did not show any direct effect on the mentioned factor.

- **Aggregation Approach**

In aggregation analysis, researcher prefers to focus on higher level (sale unit), where $n_2=30$, and moderated regression model is applied. Aggregation analysis essentially pays no attention to low level (or the first level) effects ($n_1=482$) and there are as many variables available as sale units

($n_2=30$). In such a model, researcher attempts to aggregate the second level data based on the extracted data of the fist level. Afterward, all the changes due to inter-groups differences (the first level/ sales person) are removed, which results in increasing research errors. Hierarchical regression is done in 5 steps with regard to job concepts. At first step, job involvement, role conflict, as well as role ambiguity are considered as independent variable for regression equation. Results of the first step illustrated that job involvement plays a positive effect (b= 0.742; p<0.01) on sales

person performance, whereas role conflict and role ambiguity showed a negative (b=-0.467; p0<0.05) and neutral effect in this regard, respectively. In next step, entering second level variables into the system, one

could find that competitive climate solely negatively affects the sales person performance. (b=-0.0411; p<0.01).

Table 3: Multiple Moderated Regression Result- Aggregation Approach (n=30)

Variable	Step1	Step2	Step3	Step4	Step5
JI	0.742^c				
RA	-0.467^b				
RC	-0.135				
SSE		0.04			
CO		-0.096			
COCL		-0.411a			
JIxSSE			0.003		
RAxSSE			-0.376		
RCxSSE			-0.080		
JIxCOCL				0.196	
RA*COCL				0.706^b	
RCxCOCL				0.039	
JIxCO					0.321
RAxCO					0.413
RCxCO					0.175
R2	0.653	0.703	0.756	0.795	0.865
Δ R2	0.427	0.068	0.077	0.059	0.116
ΔF	6.448	1.036	1.204	0.909	2.152
Sig. ΔF	0.002	0.395	0.334	0.457	0.139

a=p<0.1; b=p<0.05; c=p<0.01

Figure 2 is represented based on the results of moderated regression shown in previous Table. As seen in figure 2, role conflict and role ambiguity have negative direct effects

and job involvement has positive effect on salesperson's performance. Competitive climate has negative direct effect on sales person performance. Competitive climate

has negative moderates the relationship between role ambiguity and salesperson's performance positively.
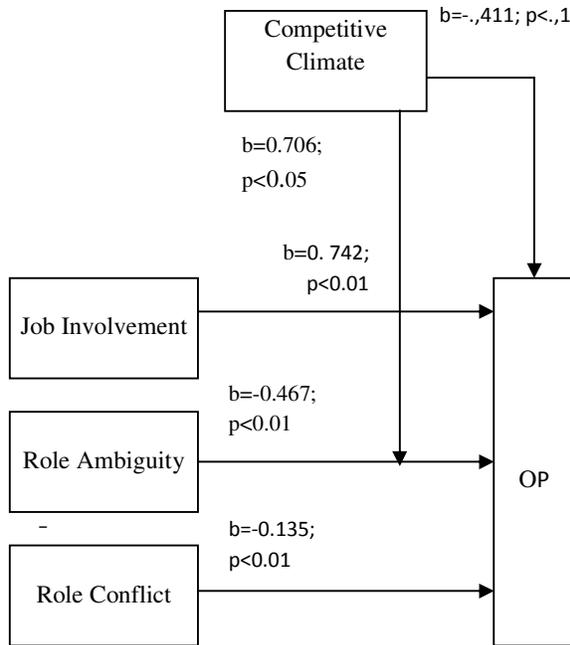

Fig 2: Tested Model in Aggregation Approach

- **Multilevel Level Approach**
- **Requirements of Hierarchical Modeling**

Prior to multi-level analysis, numerous sensitive and precise conditions are to be considered as follows: Differences of studied variables for sale unit variety and variance are considered as the key center of any study. No changes and no variable exists to be studied. For multi-level studies, thus, it is so important to investigate the

differences amongst the variables for sale unit level. Therefore, the variables with no significant differences with the other groups could not be entered to the multi-level studies. Thus, the whole hypotheses, containing the considered variable, are not testable. Hence, in contrary to single level analysis, for multi-level studies the hypotheses are not essentially testable (Liao, 2002).

- **Within Group Agreement**

Level of structure may be different from that of measuring the level in multi-level studies. In the cases that the structure level is a high level such as group, organization and industry measured at lower level (common characteristics), the researcher is required to combine inputs of the lower level to obtain structure of the higher level. In case of variation and variance in the inputs to be combined, is it reasonable to combine the inputs? Simply speaking, the common characteristics state that the same can be generalized for all the members at any level (sales person in any sale unit).It necessitates agreement of the members on evaluation of the same structure. Thus, it is essential to calculate an index for

measuring the agreement of group for all the variables under study at sale unit level. The most common index for such purpose was submitted by James et al., (1984) for Likert scales. These researchers introduced two index rates.

1- In case it is 7 or higher, the inputs can be combined easily and the members reach agreement simply on one variable. Equation for such case appears below:

$r_{wg}=1-(S^2_X/\sigma^2_{null})$ Where, S^2 is variance of the numbers allocated to the variable by individuals,

$(A^2-1)/12=\sigma^2_{null}$ is neutral distribution variance in case there is no agreement, and A is the number of the answer choices in Likert scale. (In 7-point Likert, A=7).

2- In case several variables are observed, equation for such case appears below:

$$r_{WG(J)} = \frac{J[1-(\bar{s}^2/\sigma^2)]}{J[1-(\bar{s}^2/\sigma^2)]+\bar{s}^2/\sigma^2}$$

Where, J is the number of questions.

With regard to the fact that marking and sale are multi-criteria, the second index phenomenon is used more. Variance analysis results are unilateral and index of in-group agreement for variables.

Sale level in this research is shown in table (5).As seen there, each of the three variables bear meaningful average difference between sale units(n_2=30).But ,base on in-group agreement index, two variables, support of independence and customer-orientation lack a proper convergence. Consequently, all the hypotheses containing these two variables are impossible to be tested.

Table 4: ANOVA and Within Group Agreement for Second Level Constructs

Variable	r_{wg}	ANOVA (F Values)
Competitive Climate	.,72	1.70[b]
Customer Orientation	.,64	3.77[c]
Collective Sale Self-efficacy	.,71	2.84[c]

a=p<0.1; b=p<0.05; c=p<0.01

- **Intercept Only Model**

As observed, amount and the meaningful level τ00 shows difference in performance average number among the sale units. Intercept ICC shows that 11.35% of sale unit performance changes lay in difference among the sale units. Intercept-only model equations are as below:

L1: $OP_{ij}= B_{0J} + r_{ij}$

L2:
$B_{0J}= \gamma_{00}+ u_{0j}$
MIXED Model $OP_{ij}= \gamma_{00} + u_{0j}+ r_{ij}$

Table5: One Way ANOVA /Intercept-Only Model

γ_{00}	τ_{00}	σ^2	ICC
4.02^c	0.1813^c	1.415	11.35

a=p<0.01; b=p<0.05; c=p<0.01

- **Random Coefficient Model**

In the second step, we have three concepts namely, job desire, job stress and job ambiguity. No prediction variable arrives into the second level. The output of this step shows whether job desire, job stress and job ambiguity have an effect on sales person performance at individual level or regression equation slope in these three concepts have a meaningful difference among the sale units. Random co-efficient model equations are as below:

L1: $OP_{ij} = B_{0J} + B_{1j}(JI_{ij}) + B_{2j}(RC_{ij}) + B_{3j}(RA_{ij}) + r_{ij}$
L2:
$B_{0J} = \gamma_{00} + u_{0j}$
$B_{1j} = \gamma_{10} + u_{1j}$
$B_{2j} = \gamma_{20} + u_{2j}$
$B_{3j} = \gamma_{30} + u_{3j}$
MIXED Model: $OP_{ij} = \gamma_{00} + \gamma_{10} * JI_{ij} + \gamma_{20} * RC_{ij} + \gamma_{30} * RA_{ij} + u_{0j} + u_{1j} * JI_{ij} + u_{2j} * RC_i + u_{3j} * RA_{ij} + r_{ij}$

As observed in Table 7 (random coefficient model) $\gamma 10 = .,367$; $t(29) = 4.33$; $p < ./01$. Therefore**,** one can deduce that sales person job desire has a positive effect over sales person performance. Concerning job stress $\gamma 20 = -.,168$; $t(29) = -2.30$; $p < 0/05$. Thus, it can be concluded that sales person job stress has a negative effect on its performance. With regard to $\gamma 30 = -.,162$; $\tau(29) = -2.36$; $p < ./05$, it can be said that job ambiguity also has a negative effect on sales person performance. R_2, in random co-efficient model for the job concepts, shows that about 16.8% of the changes in the sales person performance can be attributed to the three job concepts: desire and ambiguity. Regression error variance in the second level of desire for job is $\tau 11. = 115$; $\chi 2(29) = 44.14$; $p < 0.05$.

Table 6: Random Coefficients Model

γ_{00}	γ_{10}	γ_{20}	γ_{30}	τ_{00}	τ_{11}	τ_{22}	τ_{33}	σ^2	R^2
-	-	-	-	-	-	-	-	1.77	0.168
3.8[c]	-	-	-	3.02[b]	-	-	-	-	-
-	·.367[c]	-	-	-	0.115[b]	-	-	-	-
-	-	-0.168[b]	-	-	-	0.08[b]	-	-	-
-	-	-	-0.162[b]	-	-	-	0.055[b]	-	-

a=p<.,1; b=p<.,05; c=p<.,01

Therefore, difference of slope in desire for job (Blj) among the groups is meaningful. Output of this step shows if these three concepts effect sales person performance at individual level or regression equations slope of these concepts has a meaningful difference among the groups. Since the regression error variance for the second level of the variance "Job ambiguity" is 0.05=42. 75;P<0.05 , it can be said that the slope for job ambiguity (B3J) among the groups has a meaningful difference.

Table 7: Intercepts as Outcomes Model

γ_{00}	γ_{01}	γ_{02}	γ_{10}	γ_{20}	γ_{30}	τ_{00}	τ_{11}	τ_{22}	τ_{33}	σ^2	R^2
-	-	-	-	-	-	-	-	-	-	1.173	0.06
2.94[a]	0.104	0.096[b]	-	-	-	3.2[b]	-	-	-	-	-
-	-	-	0.366[a]	-	-	-	0.118[b]	-	-	-	-
-	-	-	-	-0.176[b]	-	-	-	0.09[b]	-	-	-
-	-	-	-	-	-0.162[b]	-	-	-	0.057[b]	-	-

a=p<.,1; b=p<.,05; c=p<.,01

difference. Regression error variance of desire for job is42.75.0; p<.,05=.,055; $\chi2(29)=\tau33$ and shows that the slope of this variable (B2J) has a meaningful difference. Variance (B·J) says that the fixed number in the sale performance equation among the sale units has a meaningful difference $\tau00=3.02;\chi2(29)=44.18: p<0.05$.

L1: $OP_{ij} = B_{0J} + B_{1j}(JI_{ij}) + B_{2j}(RC_{ij}) + B_{3j}(RA_{ij}) + r_{ij}$
L2 : $B_{0J} = \gamma_{00} + \gamma_{01}(SSE_j) + \gamma_{02}(COCL_j) + u_{0j}$
$B_{1j} = \gamma_{10} + u_{1j}$
$B_{2j} = \gamma_{20} + u_{2j}$
$B_{3j} = \gamma_{30} + u_{3j}$
MIXED Model: $OP_{ij} =$ $\gamma_{00} + \gamma_{01}*SSE_j + \gamma_{02}*COCL_j + \gamma_{10}*JI_{ij} + \gamma_{20}*RC_{ij} + \gamma_{30}*RA_{ij} + u_{0j} + u_{1j}*JI_{ij} + u_{2j}*RC_i + u_{3j}*RA_{ij} + r_{ij}$

- **Intercept Outcomes Model**

In the third step, effect of the variables at the sale unit level (self – qualification of the sale unit and competition atmosphere of the sale unit) is studied. In this step, the results showed that self-qualification of the sale unit have no effect on performance. But, the competition atmosphere of the sale unit has a positive effect: R^2 $\gamma 02 = 096$; $t(29) = 2.16$; $p < 0.05$. R^2 of the fixed numbers as consequence for basic needs shows that 6% of the variance of the fixed number (B0J) in the group is attributed to self-qualification of the sale unit's sales and its competition atmosphere. Intercept Outcomes Model equations are as below:

- **Slopes as Outcomes Model**

In the fourth step, with the two-level analysis, possible balancing effects of the variables at the second level over those of the first level are considered. In other words, in this step, the searcher tries to clarify whether the sale unit's self-qualification and its competition atmosphere have a balancing effect on the relations between the three basic needs and the performance of the sale unit. In table (9) , the results of the fourth step appear. Slopes as outcomes of model equations are as below:

L1: $OP_{ij} = B_{0J} + B_{1j}(JI_{ij}) + B_{2j}(RC_{ij}) + B_{3j}(RA_{ij}) + r_{ij}$
L2: $B_{0J} = \gamma_{00} + \gamma_{01}(SSE_j) + \gamma_{02}(COCL_j) + u_{0j}$
$B_{1j} = \gamma_{10} + \gamma_{11}(SSE_j) + \gamma_{12}(COCL_j) + u_{0j} + u_{1j}$
$B_{2j} = \gamma_{20} + \gamma_{21}(SSE_j) + \gamma_{22}(COCL_j) + u_{2j}$
$B_{3j} = \gamma_{30} + \gamma_{31}(SSE_j) + \gamma_{32}(COCL_j) + u_{3j}$
MIXED Model: $OP_{ij} =$ $\gamma_{00} + \gamma_{01}*SSE_j + \gamma_{02}*COCL_j + \gamma_{10}*JI_{ij} + \gamma_{11}*SSE_j*JI_{ij}$ $+ \gamma_{11}*COCL_j*JI_{ij} + \gamma_{20}*RC_{ij}$ $+ \gamma_{21}*SSE_j*RC_{ij} + \gamma_{22}*COCL_j*RC_{ij}$ $+ \gamma_{30}*RA_{ij} + \gamma_{31}*SSE_j*RA_{ij} + \gamma_{32}*COCL_j*RA_{ij}$ $+ u_{0j} + u_{1j}*JI_{ij} + u_{2j}*RC_i + u_{3j}*RA_{ij} + r_{ij}$

Table8: Slopes as Outcomes Model

γ_{00}	γ_{01}	γ_{02}	γ_{10}	γ_{20}	γ_{30}	γ_{11}	γ_{12}	γ_{21}	γ_{22}	γ_{31}	γ_{32}	τ_{00}	τ_{11}	τ_{22}	τ_{33}	σ^2	R^2
-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	1.28	-
2,08	.,47	-.,124	-	-		-	-	-	-	-	-	4.18[b]	-	-	-	-	-
-	-	-	1,02[a]	-		-.,214[a]	.,097[a]	-	-	-	-	-	.,092	-	-	-	.,225
-	-	-	-	-.,91[a]		-	-	.,19[a]	-.,05	-	-	-	-	.,092[b]	-	-	.,011
-	-	-	-		-.,05	-	-	-	-	-.,014	-.,011	-	-	-	.,068[b]	-	.,17

a=p<.,1; b=p<.,05; c=p<.,01

In order to study the balancing effect of the sale unit's self-qualification and its competition atmosphere, it is necessary to examine the co-efficient γ_{11} and γ_{12}. With regard to γ_{11}=./214./ τ (29) = -1.88:p<."1, it is clear that the self-qualification of the sale unit's sales has a negative balancing effect on relation between the job desire and the sales person performance. Based on the analysis γ_{12}=0.01.;1 (29) = 2.02; p<;1. Therefore, it can be concluded that the competition atmosphere of the sale unit has a positive balancing effect on the relation between the job desire and the sales person performance. γ_{21} reflects the balancing effect of the sale unit's self-qualification on the relation between job stress and the sale units' performance. γ_{22} indicates balancing

effect of the sale unit's competition atmosphere on the relation between job stress and performance of the sales person. As γ_{21}=..,19 : τ (29)=0.19 : p<0.1, the sale unit's self-qualification has a balancing positive effect on the relation between job stress and sales person performance. The results showed that = 0.05 : τ (29)= 1.48. Therefore, the sale units' competition atmosphere has no balancing effect on the relation between job stress and the sales person performance. As = ·.014 : τ (29) = 0.161, = -0.61: 1(29)= 0..285, it can be said that the self –qualification of sale unit's sale and the sale unit's competition atmosphere has no balancing effect on the job ambiguity and the sales person performance. The error variance of the first regression equation at

the second level (too) shows that the fixed number in this equation, which is average performance rate of the sales person in all the sale units, has a meaningful differenced among the sale units (too = 4.18: $\chi2(27)$ = 44.18 : P <0.05). The error variance of the regression equation of the second level (t11) shows that the fixed number in this equation, which is slope of the job desire in the sales people of all the sale units, has no meaningful difference among the sale units under study ($\tau11$= 0.092: $\chi2(27)$= 36.56).

The error variance of the third regression equation at the second level (t22)shows that the fixed number in this equation, which is average slope of job stress of all the sale units, has a meaningful difference among the sale units under study ($\tau22$= .,.092: $\chi2$ (27)= 40.75: p < 0.05).

The error variance of the fourth regression equation at the second level (t 33) shows that the fixed number in this equation, which is average slope of job ambiguity in of all the sale units, has a meaningful difference among the sale units under study. ($\tau33$= 0.068: $\chi2$ (27)= 43.07: p <0.05).The balancing effects of two variables (self qualification of the sale units' sale and the sale units' competition atmosphere) on the relation between desire, stress and ambiguity and the sales person performance appears below:

Now, in conclusion, it is possible to submit the different relations between variables of the sales person level and the variable at the sale units' level, by two-level analysis of the job concepts,, in writing . Based on different steps in two-level analysis, it was proved that the competition atmosphere of the sale unit has a positive and direct effect on performance of the sale unit. But, self–qualification of the sale unit's sales has no direct effect on the sales person performance. It was also found that the competition atmosphere, of the sale unit has a balancing positive effect on the relation between job desire and the sales person performance. The self-qualification of the sale unit's sale has a balancing negative effect on the relation between job desire and the sale unit's performance. The results also showed that neither the sale unit's competition atmosphere nor the self- qualification of the sale unit's sales has a balancing effect on the relation between job ambiguity and the sales person performance .
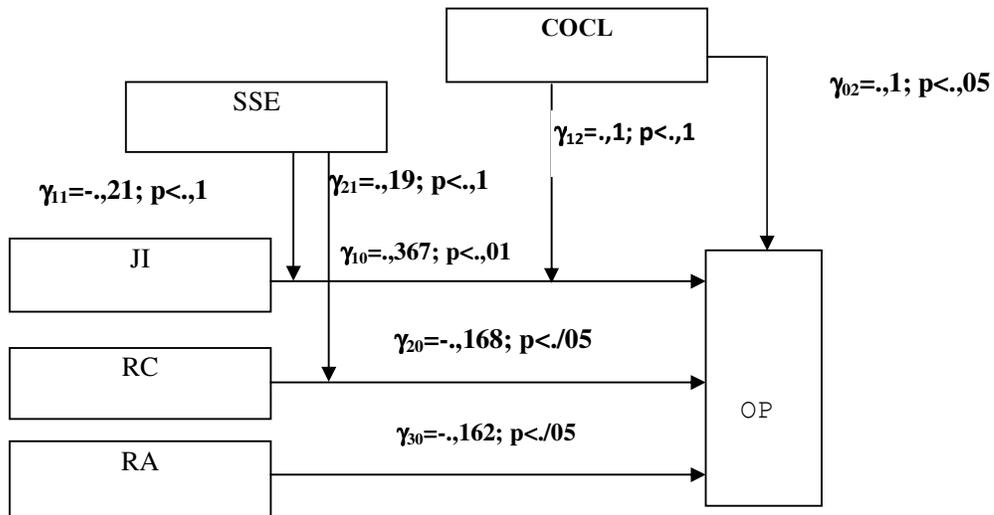
Fig 3: Two Level Models of Job Perceptions and Sales Unit Characteristics

- **Conclusion And Discussion**

Results of this research showed that the job involvement each of the three attitudes has a positive effect on performance of the sale unit. Therefore, findings of this research are in the same direction with the results of the researches done by Brown. 1996: Brown and Leigh. 1996: Chughtai, 2008. Rotenberry and Moberg, 2007. Diefendorff et al. 2006. Lassk et al. 2001. In fact, the more desire the sales person has for his job, the more his performance increases. The analysis showed that in the collection attitude, effect of job desire on performance of the saleunit is more than that of separation and two- level attitudes. The

results of this research showed that the ob stress in both attitudes of separation and two-level has a negative effect on performance. But in the collection attitude, no effect was observed. Findings of this study are in the same direction with the researches performed by lysonski 1985: Sohi 1996. They confirm each other. These findings show that the job stress decreases the performance of sale units.

The results of this research in the three attitudes (separation, collection, two-level) shows negative effect of job ambiguity on performance that are in the same direction with the results obtained from the researches done by Hampton et al 1996,

Sohi 1986, Brown and Peterson 1996, Dubin skey and Hartely 1993 and confirm them. In other words, increase of job ambiguity reduces the sales person performance. Table 9 shows effects of the job concepts on performance of the sales person in the three attitudes of the analysis.

Table9: Comparison of Job Perceptions Effects on Salespeople Performance

Analysis Approach Role Perception	HLM	Aggreg ation	Disaggr egation
Job involvement	0.367	0.742	0.338
Role conflict	-0.168	--	-0.147
Role ambiguity	-0.162	-0.467	-0.135

The results show that direct effects of two specifications of qualified sale unit in two-level analysis, in – group agreement and difference in the groups, namely competition atmosphere of the sale unit and self-qualification of the sale unit's sale have a slight and weak effect on performance. In fact, only the competition atmosphere of the sale unit has a direct and positive effect on performance. These findings showed that in study of effect of the sale unit's specifications on the sales person performance, mediator variables at individual level and/or balancing relations that can convey such effect should

be looked for .

The findings of this study in the job concepts showed that the competition atmosphere of sale unit has a balancing positive effect on the relation between job concept and performance. In other words, in the sale units with high competition atmosphere, the effect of job desire on stronger performance is more than the sale units with weak competition atmosphere .

In this model, the analysis showed that the self qualification of the sale unit's sale has a positive effect on the relation between job stress and performance. This shows that the negative effect of job stress on performance decreases when self-qualification level of sale unit's sale increases. Another balancing effect identified is negative effect of sale unit's sale relation between job desire and performance. It shows that an increase in the level of self-qualification in sale unit sales decreases the effect of job desire on performance .

- **Future Research**

As the sale unit's performance is a two-dimension phenomenon (behavior and result), it is proposed that the researchers, in their future researches, test and compare

model of this research in behavior and result. Consideration of control system in the sale organization as a balancing variable can be further studied. Test of the model in other countries and industries and comparison of the results can also be considered by researches in future .

In this study, we focus on the objective performance of salespeople, while other studies might be interested in behavioral performance. This model can also be tested in other industries such as automotive and home appliances. Investigation of the variables such as: management support, organizational culture and type of control can be interesting as moderator variables in sales unit level.

- Limitations of Research

The most important limitation in this research is lack of input base for measurement of performance and the recording basis. That is why the researchers measured the sales person performance by means of questionnaires .

Another limitation was sensitivity of the issues related to sales in the opinion of the directors and sales people, because of competition in food industry. Locations of

the companies under study were scatteres and in different places, which was another limitation.

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تحلیل چند سطحی عوامل تعیین کننده عملکرد نیروی فروش

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این پژوهش بر مبنای فرضیه های حاوی ارتباط بین ابهام و تعارض نقش، اشتیاق شغلی و عملکرد نیــروی فروش در سطح فردی و خودکارآمدی جمعی فروش, مشتری گرائی و جوَ رقابتی در سطح واحــد فــروش در صنعت مواد غذایی ایران یک الگوی دو سطحی ارائه نمود. داده های لازم برای آزمون الگوی پــژوهش از ۴۸۲ نیروی فروش از ۳۰ شرکت بر اساس پرسشنامه ای ۵۱ سوالی به شیوه خودگزارشی گردآوری شد. الگوی پژوهش با سه رویکرد: تفکیک, تجمیع و چندسطحی آزمون شد. نتایج سه رویکـرد متفــاوت بــود. یافته های تحلیل چند سطحی نشان داد که ابهــام و تعارض نقش بر عملکرد نیروی فروش اثر منفــی دارنــد امّا خودکارآمدی جمعی فروش و اشتیاق شغلی بر عملکرد نیروی فروش اثر مثبت دارد. نتایج تحلیل چنــد سطحی نشان داد که خودکارآمدی جمعی فروش اثر تعدیل گر مثبــت بــر ارتبــاط بــین اشـتیاق شــغلی و عملکرد نیروی فروش و اثر تعدیل گر منفی بر ارتباط بین تعارض شغلی و عملکرد نیروی فروش دارد.

واژگان کلیدی: ادراک شغلی، واحد فروش، عملکرد، چند سطحی.

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