

An Efficiency Prediction of Mobility Solutions in Direct Selling Businesses of Mainland China

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Abstract

In this empirical research, the subjects were renowned direct sellers in China, and the survey was conducted with a questionnaire to (1) investigate whether adaptive marketing has any positive impact on sales performance through reliability and validity analyses, (2) analyze the comparison between direct and indirect impact and define the best analysis model, and (3) find out through reliability and validity analyses whether the introduction of mobile solutions to direct selling companies and salespeople has any positive impact on sales performance. This experiment is a theoretical and empirical investigation into the framework using the AMOS software. The model that considers the indirect impact between each dimension is better than the one that considers the direct impact. Adaptive marketing also positively impacts sales performance. The introduction of mobile solutions to the direct selling industry can improve sales capacity and benefit sales performance.

Keywords: Direct selling, AMOS, reliability analysis, adaptive marketing, mobility.

1. Introduction

According to the latest statistics published by the World Federation of Direct Selling Associations [21] in 2013, The top three global direct selling markets were the United States, Japan, and China, with global market shares of 19%, 14%, and 12%, respectively. According to the statistics provided by the Information Management System of the Direct Selling Industry, managed by the Ministry of Commerce of the People's Republic of China [7], at the end of 2013, the status of the development of direct selling in the country is as follows. There were 41 direct selling enterprises, comprising 19 domestic-funded enterprises and 22 enterprises with foreign investment, 311 branches, 10,911 service points, 3,085 types of direct selling products, and 2.066 million salespeople practicing direct selling. In 2013, they contributed RMB21.577 billion of revenue, a 41% increase over 2012, and broke the highest record of annual growth rate of the direct selling industry in China. In terms of the volume of salespeople practicing direct selling, four enterprises had over 100,000 staffs, with a total of 1.9241 million people, constituting 93.57% of the overall number of the industry. One of the four enterprises had 1.1871 million salespeople

practicing direct selling, which was the highest in number and constituted 57.73% of the total in the industry.

2. Purpose

As the direct selling industry prospers in China, endless opportunities as well as corresponding bottlenecks and management risks are also emerging. Examples are adjustments to the development and formation of adaptive direct selling strategies at any time according to local policies are necessary to secure new markets; In the face of globalization, expanding business internationally and keeping track of the business situations of all teams is necessary; The impression of rigidity in the direct selling industry still exists in the minds of outsiders. New branding and building of consumer confidence can resolve this situation; The turnover rate should be managed. Recruiting and retaining direct sellers are crucial; The integrity of direct sellers varies. For instance, there are people who impersonate direct sellers to defraud consumers and direct sellers who defraud direct marketing companies and competition through hoarding or price slashing; Direct selling enterprises with foreign investment enjoy an edge in competition in new markets. Local enterprises are struggling for ways to catch up.

As the restructuring of China's economy progresses and regulations on the direct selling businesses operating on the district level are relaxed, a vast room for development has opened up in the direct selling industry. In the future, the rapid growth of the direct selling businesses that have tapped into China's market will be unstoppable despite the challenges and managements risks mentioned above. The development and transformation of China's direct selling industry is worth noting and studying.

A bottleneck in management is caused by some characteristics of the direct selling industry, such as its prosperous development, varying quality of direct selling businesses, and uncertainty of sales location. Many direct selling businesses have introduced electronic solutions and established online business platforms, which allow them international access. However, some of the information and functions of the electronic mode are insufficient, and thus still need to be mastered through the mobile mode. Examples are the usage locations of users, the demonstration of products to customers at any time, and engagement in online learning at any time. Hence, this research attempts to investigate (1) whether a positive relationship exists between adaptive selling by salespeople in the direct selling industry and sales performance and (2) whether the introduction of mobile solutions has a positive impact on adaptive selling by salespeople in the direct selling industry and on sales performance. This research helps the direct selling industry to devise elaborate mobile solution plans, achieve expected performance, and reduce the potential risks of introducing mobile solutions.

3. Literature Review And Assumption Derivation

3.1. Definition of direct selling

According to Section 3 of the Administration of Direct Selling Regulations of China, direct selling refers to the sales mode of the direct marketing and selling of products by

direct selling personnel recruited by direct selling enterprises to final consumers away from fixed business locations.

Li Aizheng (2005) [1] suggests that direct selling can be explained in broad and narrow senses. In a broad sense, direct selling refers to a sales mode with no fixed or permanent sales location, including online sales, TV shopping, mail order, and personal selling. In a narrow sense, direct selling, also known as personal selling, is a sales mode of marketing and selling products or services by independent salespeople through face-to-face demonstrations or displays away from fixed locations.

Wang Yuben of the Research Center for Direct Selling at Peking University proposes that direct selling comprises at least three dimensions such as the absence of a store, which means sales do not take place in the market in the traditional sense; the directness of products reaching the final consumers; and the directness of human bonding through products. These definitions are similar to the ones used in many other countries, the key definition being sales without a fixed location through independent salespeople and, in the sale of products, through displays and demonstrations.

3.2. Mobile solution

Mobile commerce (m-commerce) is enjoying the function of electronic commerce through the combination of the Internet and a wireless device. The present structure of the industry is transforming from electronic commerce to mobile commerce, which is the new process flow that integrates Internet, wireless, and electronic commerce (Kalakota and Robinson, 2001) [13]. Zhang Zhe (2010) [24] explained that m-commerce means engaging in electronic commerce through a mobile internet with a mobile terminal device, in a broad sense, and engaging in electronic commerce through the Internet connected by the mobile communications network with the cellphone as terminal, in a narrow sense.

Forrester Research, an American market research company, interprets mobile commerce as engaging in communication, interaction, and transactions with a handheld mobile device and an “always-on” and high-speed Internet connection. Academics have highlighted the characteristics of mobile commerce that traditional electronic commerce lacks. Meng Jian and Yang Yang (2011) [17] considered mobile commerce as a new mode of commerce that integrates mobile communication technology, the Internet, and electronic commerce and possesses features such as mobility, convenience, localizability, identifiability, and personalization. Coyle (2001) [5] and Kalakota and Robinson (2001) explained that mobile commerce has different applications, ranging from personal payment services and the internal business processes of enterprises to cross-organizational supply-chain integration. According to Mobile Commerce [23], written by Yuen Yufei et al., enterprises started developing new mobile commerce solutions to enhance business performance, and the introduction of a support system for mobile workers not only gives an enterprise competitive edge but also enhances its productivity. Gebauer and Shaw (2004) [11] mentioned the following benefits that mobile commerce can bring to enterprises so that the first, Efficiency in enterprises can be enhanced through the distribution of duties and teamwork among employees (Leung and Antypas, 2001). The second, The

automation and streamlining of the business process of enterprises can raise productivity, lower operational costs, increase customer satisfaction, and enhance decision-making capacity, thereby benefiting the enterprises (Varshney et al., 2002). The third, Mobile commerce can enhance efficiency and performance and support electronic commerce and electronic business (Nah et al., 2005).

Despite these characteristics, difficult issues, like the ones associated with electronic commerce, will emerge. For example, Wu and Wang (2005) [22] highlighted the issues of consumer privacy, the security of money flow involved in transactions, and ordering products and services. In introducing and assessing mobile technology, enterprises introduce not only new technology but also new work flow. According to Wang Nan, Xu Congwei, and Zheng Ping (2009) [19], the popularization of mobile commerce and cross-industry integration can lead mobile commerce to a new phase, wherein mobile commerce becomes essential to enterprises.

3.3. Sales performance

Babakus (2001) [2] defined sales performance as salespeople's performance when they are carrying out sales tasks and interacting with clients on various occasions. In sales literature, sales performance is an issue that captures the interest of academics who persistently attempt to identify the deciding factor of good sales performance. Stanton (1975) [18] argued that sales performance can be assessed on both quantitative and qualitative bases on the first, Quantitative basis that assessments can be divided into output factors and input factors. Output factors, which are commonly used as criteria for sales performance assessments, include sales volume and percentage of sales volume in terms of quota, gross profit from sales, order situation, and customers' response. The second Qualitative basis that includes factors such as knowledge of products, company policy, and competitive scenario; the relationship between employees and clients; personal appearance; health conditions; character; and attitude.

Numerous criteria are used to evaluate sales performance. However, Jackson, Ostrom, and Evans (1982) [12] and Dubinsky and Berry (1982) [8] showed that sales volume is not a criterion reflecting the success of the salesperson in the short term. Darmon (1982) [6] suggested that academics evaluate complex sales performance with few criteria. In light of these findings, this research designs three questions for third-party performance evaluation.

3.4. Adaptive selling behavior

Adaptive selling is defined as modifying oneself to fit the environment to achieve sales goals. Weitz (1986) [4] argued that stressing the adaptive approach can enhance the efficiency of salespeople, which is echoed by other researchers and ability tutors. For instance, Erika (1999) [10] pointed out that empathy, one of the ten most prominent traits of top salespeople, is a presentation of adaptive selling. In a study of successful and unsuccessful salespeople conducted by Baker (1999) [3] in Canada, seven criterion namely, output performance, technical knowledge, sales ability, adaptability, teamwork, sales

planning, and sales backup were used to evaluate the performance of salespeople. Among the criteria, adaptability stood out as the most effective and consistent dimension that distinguishes high and low performance.

Relationship between sales performance and adaptive selling that adaptive selling is the most important dimension of sales performance (Weitz, 1986). Adaptive selling helps salespeople handle problems and situations effectively and thus achieve excellent performance. Deduction from the above literature there is exists an obvious positive relationship between adaptive selling and sales performance, as shown in Figure 1.

3.5. Sensitivity to the expressive behavior of others and ability to modify self-presentation

In the adaptive selling framework proposed by Weitz et al. (1986), adaptive selling is the main factor, apart from motives and knowledge, influencing adaptive selling behavior. The self-monitoring scale developed by Lennox and Wolfe (1984) [14] was suggested for evaluating salespeople's adaptive selling skills. Although empirical research with salespeople as research subjects indicates a positive impact or connection with salespeople's self-monitoring tendency for adaptive selling (or behavior), the scales or assessment dimensions used in different researches vary. For instance, Spiro and Weitz (1990) selected two dimensions, "sensitivity to expressive behavior of others" and "ability to modify self-presentation," from the self-monitoring scale developed by Lennox and Wolfe (1984). Lin Hung-Liang (2000) [15] used not only the self-monitoring scale developed by Lennox and Wolfe (1984) but also the average value of the total added to evaluate the research subjects' self-monitoring tendency. Salespeople's ability to modify self-presentation (also known as social skills) is definitely beneficial to their interaction with customers, but their "ability to modify sales actions and strategies" plays a more important role in accommodating customers' needs and solving their problems. In other words, the dimension of "ability to modify self-presentation" in the self-monitoring scale developed by Lennox and Wolfe (1984) mainly evaluates an individual's ability to make timely modifications and present emotional reactions and styles that fit particular situations, such as others' preferences, based on the situational cues perceived during the individual's interactions with others.

Based on the discussion above, this research defines salespeople's ability of self-monitoring with reference to the dimension of "sensitivity to expressive behavior of others" in the self-monitoring scale developed by Lennox and Wolfe (1984), the suggestion of Giacobbe (1990), and the definition of adaptive selling by Weitz et al. (1986). The definition pertains to salespeople's ability to perceive situational cues during sales interactions and adapt a selling strategy to fit sales situations. Salespeople's ability of self-monitoring is divided into the ability to perceive situational cues and the ability to adapt a selling strategy. The ability to perceive situational cues refers to a salesperson's ability to perceive customers' attitudes, motives, and needs through verbal or non-verbal cues during interactions with them. The ability to adapt a selling strategy refers to a salesperson's ability to effectively modify selling strategies, tactics, and messages conveyed during interactions with customers. According to the literature mentioned above,

deductions regarding salespeople in general are made as follows, A positive relationship exists between sensitivity to the expressive behavior of others and adaptive selling and between the ability to modify self-presentation and adaptive selling.

3.6 Learning orientation and adaptive selling

A learning-oriented person believes that the key reason for failing a task is a lack of effort or an ineffective strategy and difficult tasks are opportunities for one to test existing abilities, improve them, and learn new skills (Dweck and Leggett, 1988) [9]. Since professional knowledge, skills, and abilities are important prerequisites of salespeople's adaptive selling motives and behavior (Weitz et al., 1986), learning orientation should enhance their willingness to change their sales (or social and interactive) strategies. Moreover, learning orientation motivates salespeople to work long hours because they enjoy the selling process and keep trying when they fail as difficulties do not make them think that they are a failure.

Deduction made based on the literature mentioned that in the sales industry in general, a positive relationship exists between learning orientation and adaptive selling. So far, we have attempted to investigate if any phenomenon in the direct selling industry matches the deduction results of the research mentioned above. The hypotheses made are that H1 is a positive relationship which exists between adaptive selling and sales performance; H2 is a positive relationship which exists between adaptive selling and sensitivity to the expressive behavior of others; H3 is a positive relationship which exists between adaptive selling and the ability to modify self-presentation; H4 is a positive relationship which exists between adaptive selling and learning orientation.

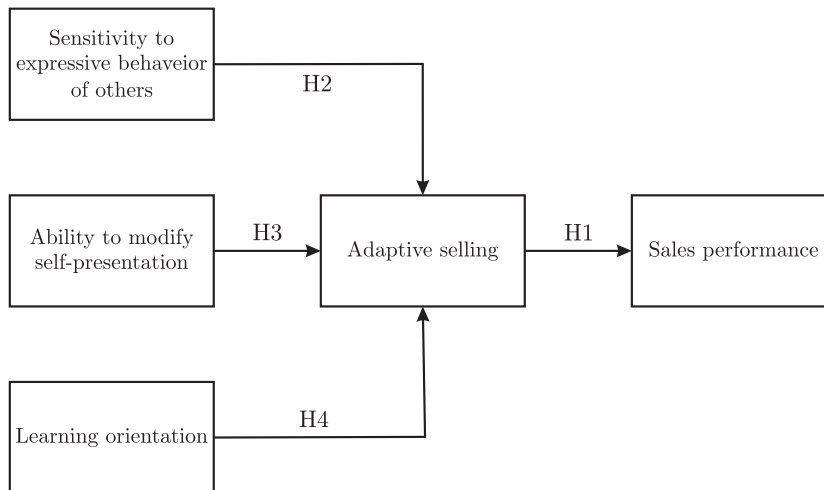


Figure 1: Hypotheses about relationships between adaptive selling and sales performance.

3.7. Relationship between mobility and sales performance

If the goals of an enterprise are instantaneity and mobility, it must become mobile to improve its business process and increase competitiveness. Li Xinpings (2013) [16] explained that the emergence of mobile-learning vitalized leadership and its effect on improving organizational development and personal abilities are gaining recognition among enterprises.

The findings of Weng Xingli and Guo Xianglan (2010) [20] comprise four dimensions which include the introduction of m-learning by enterprises, enterprises' information technology basis, knowledge management, and innovation diffusion. Analysis through the four dimensions shows that enterprises want to introduce m-learning to simulate different introduction policies and interactions. Enterprises hope that the analysis of simulation results can help them make decisions relating to mobile learning that are favorable to their interests and bring a positive relationship with sales performance. M-learning is a standardized training tool for enterprises and their employees, featuring the continuous monitoring and improvement of employees. Training can be conducted in different locations for different sales businesses. Non-uniform personnel can be made uniform.

Based on the discussion above, the following hypothesis about the sales industry in general is determined, A positive relationship exists between mobile employees and sales performance. The hypothesis of H5 is a positive relationship which exists between mobile employees and sales performance.

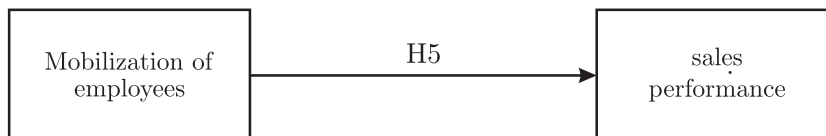


Figure 2: Hypotheses about relationships between Mobilization of employees and sales performance.

4. Research Model & Hypothesis

4.1. Design framework and hypothesis

The hypothesis of this research is that the introduction of mobile solutions has a positive impact on the operational efficiency and performance growth of direct selling companies. Based on the literature review and dimensions obtained from summarizing the literature and after the identification of the key dimensions of a positive relationship through reliability and validity analyses and hypothesis testing, the following hypotheses are tested through a designed questionnaire survey ,the first is “A positive relationship exists between adaptive selling by salespeople and their sales performance”; The second is “The introduction of mobile solutions has a positive impact on sales performance”. We hope to make use of this as a reference for direct selling companies and help them

create the synergy of the two to enhance the efficiency of sales performance when they are devising mobile solutions based on their employees' adaptive selling to customers.

Based on the literature review of different dimensions, part of the research framework and hypotheses of this research were developed are that H1 is a positive relationship which exists between adaptive selling and sales performance; H2 is a positive relationship which exists between sensitivity to the expressive behavior of others and adaptive selling; H3 is a positive relationship which exists between the ability to modify self-presentation and adaptive selling; H4 is a positive relationship which exists between learning orientation and adaptive selling.

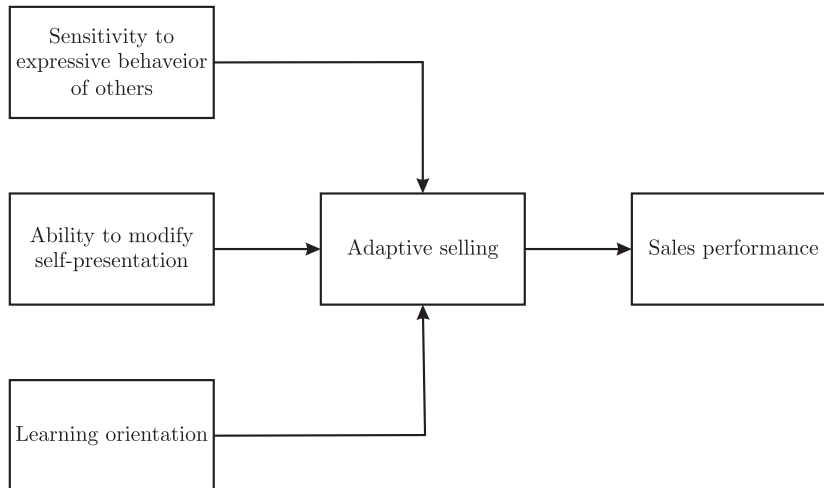


Figure 3: Research framework of experiment design 1.

Based on the literature review of different dimensions, another research framework and hypothesis of this research was developed as H5, The introduction of mobile solutions has a positive impact on sales performance. From the dimensions discussed above, a salesperson that fits all the conditions of H1H5 should also possess a positive relationship. Summarizing the discussions above, the following hypothesis model is developed for analysis and research.

4.2. Questionnaire design and data collection

The questionnaire used in this research is composed of 31 self-evaluation questions in five sections, namely adaptive selling, sensitivity to the expressive behavior of others, ability to modify self-presentation, learning orientation, and mobile employees. Another three questions pertaining to evaluation of others are about sales performance. The overall evaluation of variables is conducted based on the scale from related literature as in Table 1, and each item is evaluated using a Likert seven-point scale.

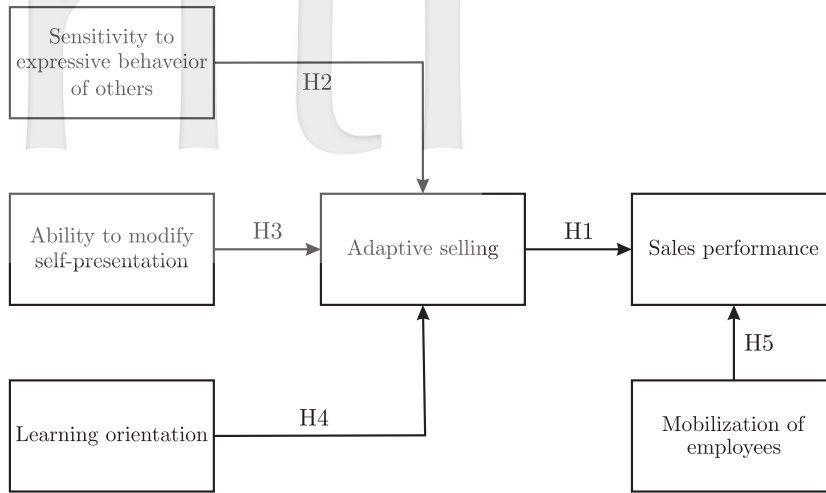


Figure 4: Research framework of experiment design 2.

Table 1: Operational definitions of variables.

Dimension	Literature reference
Adaptive selling	Robinson, L, Marshall, G. W., Moncrief, W. C., and F. G. Laskk (2002)
Sensitivity to expressive behavior of others	Snyder (1974) developed a 25-item scale based on the concept of self-monitoring, and these items are modified through the factor analysis of Lennox (1984) to 13 questions. This dimension is composed of six items.
Ability to modify self-presentation	Snyder (1974) developed a 25-item scale based on the concept of self-monitoring, and these items are modified through the factor analysis of Lennox (1984) to 13 questions. This dimension is composed of seven items.
Learning orientation	Based on the scale by Sujjan (1994)
Mobile direct selling business	Compiled based on the Usefulness Scale of Schillewaert (2005) and by evaluating the variables through personal and extended networks as defined by Elfring (2003) and Bruderl (1998).
Salesperson performance	Based on the scale by Sujjan (1994)

5. Data Analysis and Calculation

Statistical analysis of this research was carried out using SPSS and AMOS. Subjecting the questionnaire to reliability and validity analyses in SPSS confirmed its suitability as the evaluation tool and indicated the properties of the sample. The structural equation modeling analysis conducted in AMOS tested the dependent relationship of the mutual connection between more than two variables simultaneously. Testing the indicators to construct reliability with the scales showed whether the testing indicators of the scales were capable of identifying the degree of latency of the construct. The construct reliability

Table 2: Reliability.
Overall statistics for each item

Dimension	No. of questions	Cronbach's α
Adaptive selling	5	0.911
Sensitivity to expressive behavior of others	6	0.912
Ability to modify self-presentation	7	0.911
Learning orientation	5	0.934
Sales business and introduction of mobility	8	0.912
Sales performance	3	0.914

bility, convergent validity, and results of the confirmatory factor analysis (CFA) of the scales are listed in the tables below. The reliability and validity analyses were conducted according to the two experiment designs as follows:

5.1. Sample and reliability

This research was conducted from March through May, during which direct selling companies and their sales businesses were interviewed. Data were collected from 300 sales employed in the direct selling company in China, who use smartphone in their daily life for communication, surfing sites related to their work, emailing, etc. About 90 percent of the participants had direct selling industry sales experience in the previous 3 years. Most of them (80 percent) were men, and mean tenures with the company of 5 years. In terms of education, most of them held a university degree. They were informed of the research objectives and the research method as well as how the questionnaire should be completed. Completed questionnaires were subsequently collected. The research questionnaire focuses on five self-evaluation dimensions. The number of valid copies collected from the salespeople was 187.

The results of the Cronbach's α coefficient analysis of the objective indicators are concrete evidence of the quality of the tests and scales. Results from the construct reliability and path coefficient analyses in this research were gathered as well. Validity analysis was carried out based on two experiment designs. The results of the reliability analysis are listed in Table 2. The Cronbach's α of all the dimensions reached 0.9 or above, indicating the very high reliability of the questionnaire.

5.2. Efficiency calculation and analysis model testing

Regarding the validity analysis, the dimensions of the models were subjected to CFA in the model of the linear structure relation to study construct validity.

5.2.1. Experiment design 1 is SEM calculation of adaptive selling and sales performance in the direct selling industry. The model was subjected to an overall goodness-of-fit test, which mainly evaluated the external quality of the model. The framework of this research are $\text{CHI-SQUARE} = 563.944$ and $\text{DF} = 297$. However, the chi-square test is easily influenced by the size of the sample. Therefore, the normed chi-square, which equals the

chi-square divided by the degree of freedom, was used in this research to determine the goodness of fit of the preliminary model. The normed chi-square in a standard test should be lower than 3.84; the normed chi-square in this research is $563.944/297=1.90$, which conforms to the evaluation value of the normed chi-square. Other related indicators of goodness of fit are $p = .000$, GFI = .814, AGFI = .780, CFI = .830, and RMSEA = .070.

The influence of variables in model 1 are that H1 is a positive relationship which exists between adaptive selling and sales performance. (Path=1.0; $p = .000$); H2 is a positive relationship which exists between sensitivity to the expressive behavior of others and adaptive selling. (Path=0.516; $p = .000$); H3 is a positive relationship which exists between the ability to modify self-presentation and adaptive selling. (Path=0.637 ; $p = .000$); H4 is a positive relationship which exists between learning orientation and adaptive selling. (Path=0.573; $p = .000$)

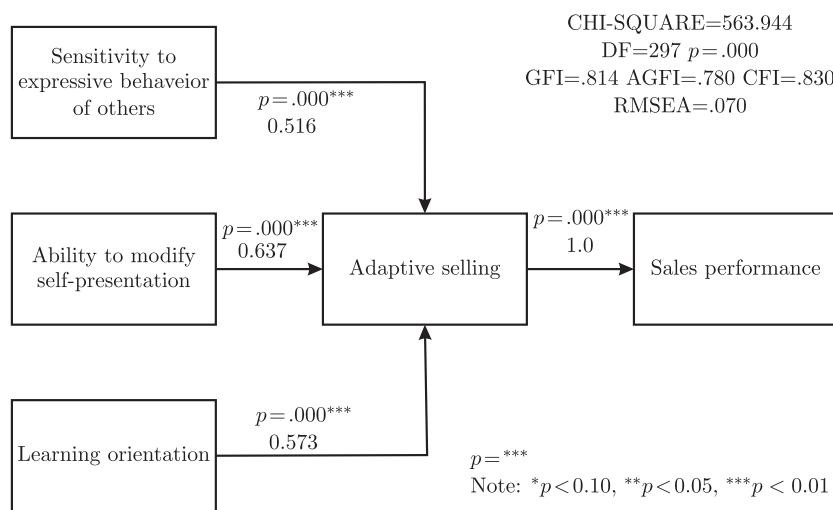


Figure 5: Analysis results of path coefficient and framework of adaptive selling of salespeople in the direct selling industry in relation to sales performance.

5.2.2. Modified experiment design 1 is Analysis of the mutual influence of the dimensions in the calculation of adaptive selling in the direct selling industry, and sales performance. Since the fundamentals of the dimensions in experiment design 1 have mutual influence on the interviewees and the people who actually work in the industry, the prospects of the influence of the dimensions are included in the model design, as illustrated in the following figure

The results presented in Figure 7 were obtained through the AMOS analysis of the questionnaire values

The influence of variables in modified model 1 are that H1 is a positive relationship which exists between adaptive selling and sales performance. (Path=1.0; $p = .000$); H2 is a positive relationship which exists between sensitivity to the expressive behavior of others and adaptive selling. (Path=0.415 ; $p = .000$); H3 is a positive relationship which

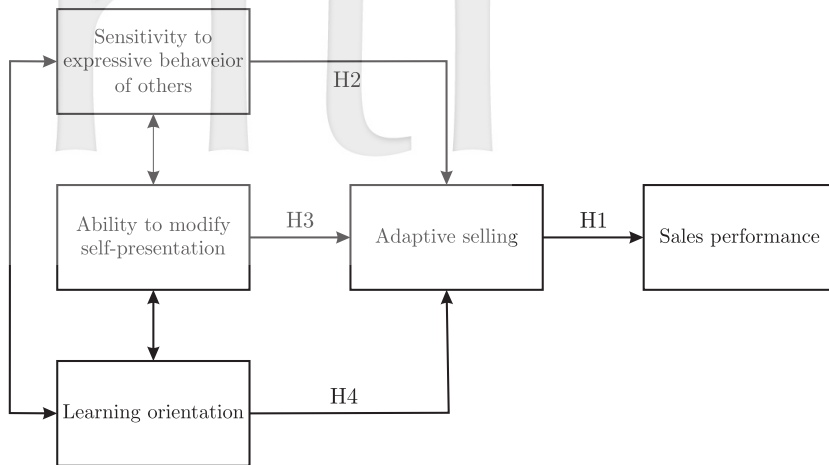


Figure 6: Modified experiment design 1.

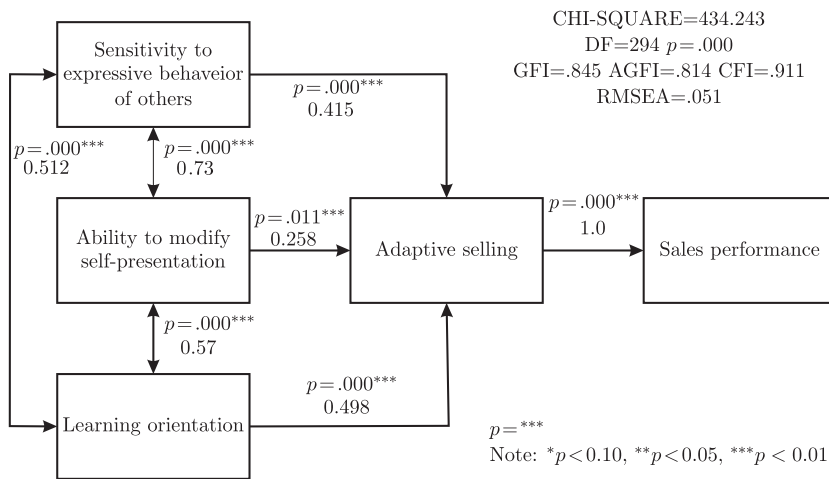


Figure 7: Result of modified experiment design 1.

exists between the ability to modify self-presentation and adaptive selling. (Path=0.258 ; $p = .011$); H4 is a positive relationship which exists between learning orientation and adaptive selling. (Path=0.498; $p = .000$); A positive relationship exists between sensitivity to the expressive behavior of others and self-presentation.(Path=0.73; $p = .000$); A positive relationship exists between self-presentation and learning orientation (Path=0.57; $p = .000$); A positive relationship which exists between sensitivity to the expressive and learning orientation. (Path=0.512; $p = .000$)

The modified model shows that CHI-SQUARE = 434.243 and DF = 294. The Chi-square criterion of this research is $434.243/294 = 1.48$ and the smallest value is 3.84, which conforms to the estimated value of the Chi-square norm. Other related indicators of goodness of fit include $p = .000$, GFI = .845, AGFI = .814, CFI = .911 and

RMSEA = .051. The results are better than those from the original model. Therefore, experiment design 2 was developed with the model for analyzing the mutual influence of the dimensions as follows :

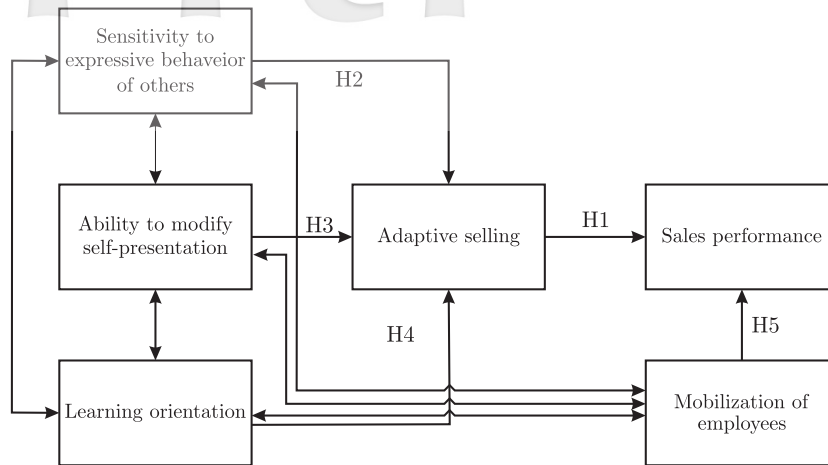


Figure 8: Model of the framework of experiment design 2.

5.2.3. Experiment design 2 is SEM calculation of mobile solutions in the direct selling industry and sales performance.

The normed Chi-square of this research is $689.893/518=1.33$, which conforms to the estimated value of the Chi-square norm. Other related indicators of goodness of fit are $p = .000$, $GFI = .822$, $AGFI = .795$, $CFI = .922$, and $RMSEA = .042$. Experiment design 2 is analysis and calculation results for a mobile salesperson in direct selling and sales performance

The influence of variables in model 2

- H1. A positive relationship exists between adaptive selling and sales performance.
Path=0.436 $p = .000$
- H2. A positive relationship exists between sensitivity to the expressive behavior of others and adaptive selling. Path=0.33 $p = .002$
- H3. A positive relationship exists between the ability to modify self-presentation and adaptive selling. Path=0.327 $p = .002$
- H4. A positive relationship exists between learning orientation and adaptive selling.
Path=0.509 $p = .000$
- H5. A positive relationship exists between Mobilization of employees and Sales performance. Path=0.707 $p = .000$

A positive relationship exists between sensitivity to the expressive behavior of others and self-presentation.

Path=0.727 $p = .000$

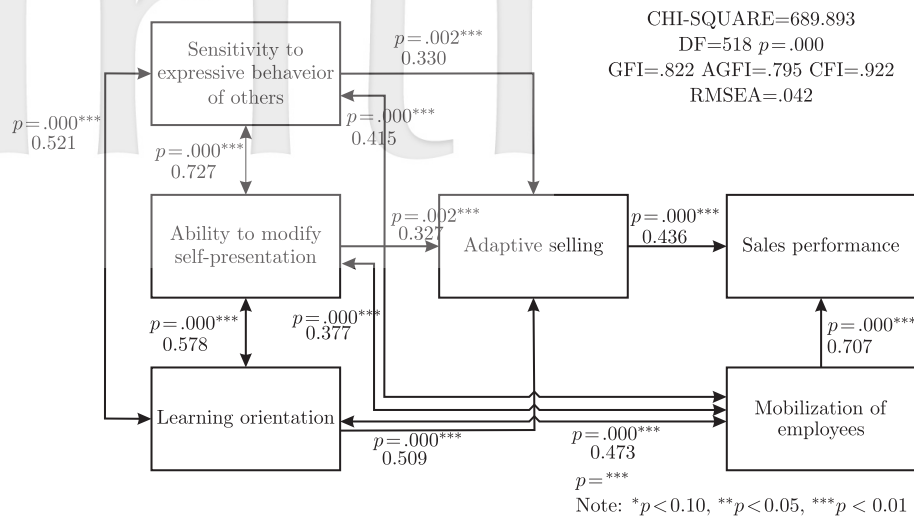


Figure 9: Analysis on the framework of adaptive selling and sales performance of a sales person after the introduction of mobile solutions.

A positive relationship exists between self-presentation and learning orientation

Path=0.578 $p = .000$

A positive relationship exists between sensitivity to the expressive and learning orientation.

Path=0.521 $p = .000$

A positive relationship exists between sensitivity to the expressive behavior of others and Mobilization of employees.

Path=0.415 $p = .000$

A positive relationship exists between the ability to modify self-presentation and Mobilization of employees.

Path=0.377 $p = .000$

A positive relationship exists between learning orientation and Mobilization of employees.

Path=0.473 $p = .000$

6. Conclusions

Based on the arguments in the previous sections of this research report, research findings are summarized and discussed, and suggestions on related follow-up investigations are offered in this section.

Goodness of fit index (GFI), Although the goodness of fit of the model framework is slightly lower than the suggested value, the difference is not significant. Hence, the overall goodness of fit of the model framework is acceptable. Adjusted goodness of fit index (AGFI), Although the goodness of fit of the model framework is slightly lower than the suggested value, the difference is not significant. Hence, the overall goodness of fit of the model framework is acceptable. Comparative fit index (CFI), Although the goodness

Table 3: Comparison and summary of the calculations result of the framework model.

	p-value	CHI-SQUARE	DF	CHI-SQUARE/DF	GFI	AGFI	CFI	RMSEA
Suggested value	*** (< 0.01)			< 3.84	> 0.9	> 0.9	> 0.95	< 0.08
Results of experiment design 1	.000	563.944	297	1.9	0.814	0.78	0.83	0.07
Results of modified experiment 1	.000	434.243	294	1.48	0.845	0.814	0.911	0.051
Results of experiment design 2	.000	689.893	518	1.33	0.822	0.795	0.922	0.042

of fit of the framework of experimental design 1 is slightly lower than the suggested value, the difference is not significant. Hence, the overall goodness of fit of the model framework is acceptable. The comparative goodness of fit of the framework of modified experiment design 1 and the framework of experiment design 2 is above 0.9. Hence, the model which takes into consideration the influencing factors of each dimension is superior. Root mean square error of approximation (RMSEA), The RMSEA of the framework of experiment design 1 and modified experiment design 1 is a fair fit; therefore, the RMSEA of the framework of experiment design 2 is a good fit.

As evident from the findings of experiment design 1 and modified experiment design 1, the three dimensions of “sensitivity to expressive behavior of others,” “ability to modify self-presentation,” and “learning orientation,” and their direct impact on adaptive selling, as well as their indirect impact on sales performance, are not intertwined in one-on-one causal relationship. On the other hand, each dimension has a mutual influence on another aspect, which is manifested in the questionnaires completed by the salespeople. Any change in one variable of the answers inevitably leads to changes in variables in the other three dimensions. Therefore, the questions of each dimension have mutually influencing factors and are not independent. In this research, the four dimensions are closely related to personal traits and tendency, and therefore the framework model of mutual influence is a more suitable analytical approach.

Experiment design 2 was developed based on the modified experiment design 1. The “mobile employee” dimension was added, its mutual influence with other dimensions constituting the framework model for the analysis. The results of this extension show that a significant positive relationship exists between salespeople in the direct selling industry, the sales industry in general, the adaptive selling behavior, and the sales performance. Adaptive selling behavior presupposes sensitivity to expressive behavior of others (the path coefficient being 0.33), ability to modify self-presentation (the path coefficient being 0.327), and learning orientation (the path coefficient being 0.509) qualities. The path coefficient of adaptive selling and sales performance is 0.436. The direct selling industry can thus refer to the analysis results when in need of suitable salespeople. Moreover, the dimension of “mobile employees” (the path coefficient being 0.707) can enhance sales performance. The findings of experiment design 2 revealed that the introduction of mobile solutions to the direct selling industry has a significant positive impact on sales performance.

The influence of introducing the factor of “mobile employees” was analyzed through comparison of experiment design 1 and 2.

“Sensitivity to expressive behavior of others” → Adaptive selling, The path coefficient dropped from 0.415 to 0.330. This is due to the fact that some of the salespeople’s personal traits do not matter as much when they become mobile. Mobile solutions help dealers modify responses under different circumstances according to consumer expressions, leading to an increase in adaptive selling and boosted sales performance after mobile solutions are introduced.

“Ability to modify self-presentation” → Adaptive selling, The path coefficient rises from 0.258 to 0.327. This is because, with the introduction of mobile solutions, salespeople can modify their abilities in advance, instead of having to take the cue from customers’ feedback to any modification.

“Learning orientation” → adaptive selling, The path coefficient rises moderately from 0.498 to 0.509; the influence of this dimension is insignificant.

“Adaptive selling” → sales performance, The path coefficient drops from 1 to 0.436; in addition to that, we can consider mobile employees → sales performance, the path coefficient now is 0.707, which indicates a significant increase in overall sales performance.

In the past, most direct selling companies switched to electronic sales channels but were yet to further upgrade to mobile. As a result, no significant increase occurred in sales performance. Direct sellers are riddled with uncertainties regarding location quality. Mobile solutions can boost sales performance, standardize sales, and include adaptive selling in the trade business. Hence, mobility benefits both enterprises and sales businesses by enhancing sales performance. The experiment design shows that the first, Each dimension has a mutual influence on others. The second, Introduction of mobile solutions to the direct selling industry has multiple benefits and is absolutely essential.

According to Chapter 3 ,Literature review and assumption derivation, it can be learned that for non-direct selling industry is concerned, H1, H2, H3, H4, H5 are positive relationships, those also are designed the framework model of mutual influence to be suitable analytical approached. Based on the conclusion as above, “Adaptive selling” has a significant positive impact on ” sales performance”. (H1, path=.436, $p = .000$); “Sensitivity to expressive behavior of others” has a significant positive impact on “Adaptive selling”. (H2, path=0.330, $p = .002$) ; “Ability to modify self-presentation” has a significant positive impact on “Adaptive selling”. (H3, path=0.327, $p = .002$); “Learning orientation” has a significant positive impact on “Adaptive selling”. (H4, path=0.509, $p = .000$); “mobile employees” has a significant positive impact on “sales performance”. (H5, path=0.707, $p = .000$). The analysis result of H1,H2,H3,H4 and H5,those can be proof the model is significant positive impact for directly selling industry.

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