Does "Brand" Work in the Taiwanese SME Manufacturers' Industrial Purchase Decision Making Process?

Work-in-Progress Paper

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Abstract

In this WIP paper, we arranged a survey of Taiwanese SME manufacturers. In this survey, we tried to identify how the criteria work in the industrial purchase decision making process. Secondly, by identification, we wanted to assess how the brand image really influences decisions.

There are six findings from the survey. (1) The companies in the purchasing and offering situations evaluate "price" in the same way. (2) While the companies offer their products, they tend to evaluate non-price criteria higher than in the purchasing situation. (3) In the different type of industrial products transactions, the companies evaluate each criterion in different ways. (4) The evaluations on each criterion are different by the main product which the companies deal with. (5) In the different industrial businesses, the scale of the companies may influence the evaluations. (6) In the different industrial businesses, some criteria will influence the stability of the business relationship.

According to these findings, we can make two deductions. (1) In the industrial transactions, price is the common factor for all companies. However, only part of the non-price factors may work in the purchase decision making process. (2) The influence of branding in B2B is a result of transactions, but not a factor to boost transactions. From the statistical analysis, we can find the companies in the offering situation evaluate brand image more aggressively in all type of products. However, when the companies are in the purchasing situation, they might not evaluate brand image in the same way. From these two deductions, we may say, the branding in B2B may have influence in some situations, but it should not be over estimated. Maybe we can comment on the supplier companies making efforts in branding, however, it is not necessarily accepted by the customer companies. Nevertheless, every successful transaction may contribute to the supplier's brand image. For example, reasonable price, high level of technology, rapid delivery, on time delivery, widely adoption of other companies…and so on. But on the other hand, the supplier's brand image may not necessarily contribute to the transactions.

Keywords: B2B branding, decision-making criteria, Taiwanese SME manufacturer, transaction situations, company characteristics.

INTRODUCTION

There are two purposes in this WIP paper. Firstly, we try to use statistical analysis to identify how the criteria work in the different types of industrial purchase. Secondly, by means of this analysis, we try to assess whether the brand image of supplier companies really influences the SME manufacturers' purchasing decisions.

B2B branding is a topic that is gathers more and more attention. As many researchers have mentioned, relatively less attention has been paid to B2B branding research till now. It is because industrial purchase decisions are considered more rational and more cost/performance concerned. Generally, a strong brand may bring the premium price to the supplier and this premium price may increase the transaction cost. Thus in the main stream of B2B research, branding has been relatively ignored.

On the contrary, there are many researchers, who have stressed the importance of B2B branding (cf. Mudambi (2002), Ballantyne & Aitken (2007), Baumgarth (2010), Walley et al. (2007), Blomback and Axelsson (2007), Glynn et al. (2007), Ghosh and John (2009)).

Therefore, the first question we have to discuss is "does brand really work in the industrial purchase decision making process?" In this paper we put our focus solely on SMEs. The reason is SMEs have fewer resources to handle the uncertainty or complexity of the situations (Gilmore et al. (2001)); therefore, they may need some other tools to help them make decisions. As many B2B branding researchers have pointed, a brand can offer some kind of guarantee to help make the purchase decision easier. However, in industrial purchasing practices, is the industrial purchasing decisions influenced by brands? This is the point worth investigating.

LITERATURE REVIEW

In the tradition of the IMP group, the business relationship is an important concept but different to the relationship marketing which has been emphasized, the IMP concept of the business relationship is changeable. For example, Gadde & Mattson (1987), Dubois, Gadde and Mattson (2003) had traced transactions in Swedish manufacturers and their suppliers, and found the business relationships were changeable in the short run through some situational events.

The decisions for B2B transactions are more rational than for consumer good choice. Because of this rational character, it is considered that decision makers are more price sensitive, care about the quality and are more cost/performance oriented. In the decision making process, the decision makers evaluate alternatives and choose the most profitable one. This rational evaluation may make the business relationships changeable. According to Dubois et al. (2003), 3 types of reasons for change had been found (Dubois et al. (2003), p.419).

On the other hand, why does a customer constantly buy industrial goods from the same supplier? There are many reasons to consider. However, from the branding point of view, we

may say it is loyalty that keeps the business relationship stable. In the B2B brand research, there are many researchers who have stressed the importance of branding. Baumgarth (2010) uses an empirical method to check the relationships between the brand orientation and performance, and found the brand orientation contributes to the performance by top managers' values, motivated norms, symbolic communication, and management behaviours. Blomback and Axelsson (2007) focused on the influence of corporate brand image on new subcontractor selections, and found corporate brand image helped the selection proceed smoothly, while the buyer had limited resources and felt the selection was risky. Walley et al. (2007) used the case study to find out the importance of branding in the UK tractor market. Ghosh and John (2009) focused on three engineering-intensive industries and found the buyers tended to choose branded components when the brand name can add significant differentiation, and to choose the component from the same supplier while the supplier adapted to the buyer. Glynn et al. (2007) explored the sources of manufacturers' brand benefits for the resellers. In the research of Glynn et al. (2007), the financial, customer and managerial benefits of the manufacturers' brand had been found. All these benefits help the reseller to choose the products from the same manufacturer and remain satisfied with the business relationship. Ballantyne and Aitken (2007) applied the service-dominant logic concept to the B2B branding research. All this B2B brand research emphasized the importance of branding and how it affects performance or the stability of business relationships. However, Mudambi (2002) found the B2B branding is not equally important to all companies, all customers or in all purchase situations (Mudambi (2002), p.531). Therefore, Mudambi stressed it was important to understand what B2B branding was, and how customers perceived the company brand.

From the literature review above, we can find two research questions for verification. (1) How decision criteria influence industrial purchase decision making in the different transaction situations? Here we refer to the transaction situations by three indexes. The indexes are the type of products (standardized/customized parts, equipment, and service), the purposes of transaction (purchasing or offering) and characteristics of the company (main product, position in the supply chain, and scale). (2)Does the B2B branding influence the decision making process? We can summarize these two research questions in a conceptual framework as in Figure 1.

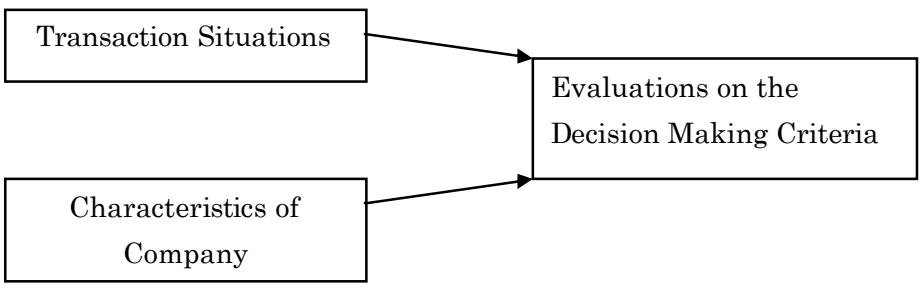

Figure1. The conceptual framework of this research

Using the conceptual framework, we are expecting to discover the situational factors that influence the industrial purchase decision making by testing the hypotheses below.

H1a: According to the transaction situation (purpose), the evaluation of the decision making criteria will be different.
H1b: According to the transaction situation (purpose and type of products), the evaluation of the decision making criteria will be different.

H2a: According to the characteristics of the company (main product), the evaluation of the decision making criteria will be different.
H2b: According to the characteristics of the company (position in the supply chain), the evaluation of the decision making criteria will be different.
H2c: According to the characteristics of the company (scales), the evaluation of the decision making criteria will be different.

SURVEY DESIGN

In our questionnaire, there are five categories of variables. They are "characteristics of the company", "purposes of transaction", "type of products", "decision making criteria", "performance". The details are shown in Table 1.

Table 1: The categories and items of the questionnaire

categories	characters of company	purposes of transaction	type of products	decision making criteria	performance
items	-main product -position in the supply chain -size of employees	-purchase -offer	-general parts -customized parts -equipment -service	-price -quality -label of technology -period of delivery -on time delivery -business relationship -adoption condition -brand image	-change in the business relationships -increase / decrease average rate of performance in the past 3 years

We asked the informants to evaluate the importance of each criterion on a 7-point scale, by the purpose of the transaction and type of product. The survey took place in Taiwan during 10th, Feb. to 20th, Mar, 2011. In total 1363 have been sampled from the name list of Taiwanese SMEs. The survey proceeded by visiting and telephone interviews. All those sampled were manufacturers (OEM manufactures are excluded) with a size of under 50 employees. All those sampled are both purchasing industrial goods from other companies and offering their products as industrial goods to others. There were 102 SME's who completed the questionnaire. The response rate was approximately 7.5%.

STATISTICAL RESULTS

After the data collection, we used SPSS ver. 15.0 to do the statistical analysis. Firstly, we checked whether there were different evaluations of decision making criteria between purchasing and offering situations? Table 2 is the result of a t-test. Except "price", the evaluations of all other criteria have significant differences between purchasing and offering situations. From the t-value, we can find the evaluations are higher on the offering situation. However, because not all criteria have significant differences, we have to reject the H1a.

Secondly, we checked the differences on the evaluations of each criterion between purchasing and offing situations classified by the type of product. Table 3 shows the means on each criterion classified by the type of product and transaction situation. In the Table, we marked the mean of the evaluations over 6. From this summary, we can find there are different evaluations of the criteria by the different types of product. However, while using ANOVA to test the evaluations among different type of products and transaction situations, we can find just three significant differences. They are on "period of delivery", "delivery on time" and "relationship" (see Table 4). Because of the significant differences that can be found just in this part of the criteria, we have to reject H1b.

Next, we checked the relations between the evaluations and the characteristics of the company. Table 5 shows the results of the ANOVA. We can find the evaluations of criteria have significant difference among the "main products" and the "scale", but cannot find any among the "position in the supply chain". According to these results, we accept H2a and H2c but drop H2b.

FINDINGS AND DISCUSSION

From the results of the hypotheses testing, only H2a and H2c have been accepted. We can say that the evaluations on each criterion are partly affected by the company characteristics (e.g. the main products and scale).

However, testing the hypotheses cannot bring further insight to the industrial transaction phenomenon. In order to develop the discussion further, we explain the test results and checked the survey results in more detail. Firstly, the meaning of hypothesis H1a's rejection is as follows. (1) In industrial transactions, "price" is a sensitive criterion, no matter whether from purchasing or offering view point. (2) On the other hand, in order to avoid price competition, the industrial company tends to evaluate the "non-price" criteria higher in the offering position than in purchasing position ideally.

The price oriented thinking tells the rational characteristic of industrial goods transactions. The companies in the offering position pay more attentions to "non-price" criteria; this result refers to the typical competition strategy.

Secondly, in spite of the hypothesis H1b having been rejected, we can check how the evaluations work separately in the transaction of each type of product. Table 6 shows the results of the t-test on the evaluations between purchasing and offering classified by the type of products. In the case of a "general parts" transaction, the evaluations on "technology",

"period of delivery" and "brand image" show statistically significant differences. In the case of the "customized parts" transaction, the evaluations on "price" and "brand image" differ significantly between purchasing and offering situations. In the case of "equipment" transactions, the evaluations on "period of delivery" and "brand image" were significantly different. In the case of the "service" transaction, the evaluations on "quality", "technology", "period of delivery" and "brand image" were significant. No matter in which case, the evaluations in the offering position were higher than the values in the purchasing position.

From the analysis of these results, we can give some further explanation on them. (1) The "general parts" is standardized so that it is easy to be replaced. In such a kind of situation, we may think price is the most efficient marketing factor. However, the statistical results tell us, when companies offer general parts they tend to stress "technology" "period of delivery" and "brand image" to make marketing promotion. (2) The "customized parts" refers to the parts with a special 'spec' that is ordered by the customer. From this characteristic, we may think that the "technology" or the factors related to the delivery are the efficient marketing factors. However, the analysis of the results tells us, the companies use "price" and "brand image" to promote their products while offering. This is not difficult to understand. Because customer companies had already known what to expect in terms of product, the price might be the most important criterion in the offering promotion. Also, the brand image of the offering companies might connect with their reliability, so that when promoting their products as customized parts, the suppliers tended to use the "brand image" to persuade their customers. (3) Purchasing equipment is an important event for all industrial companies. Equipment influences the production process. So that compared to price or technology, the period of installation and the reliability are the factors that customer companies may really care about. Constantly, the equipment manufacturers tended to evaluate the "period of delivery" and "brand image" higher. (4) Because service is invisible, when service providers tried to persuade their customers, using criteria that related to reliability (e.g. "technology" "period of delivery" and "brand image") was an efficient strategy.

A point we would like to note here is, in the analysis and explanations above, "brand image" has been stressed in all these four types of products from the offering situation. However these didn't mean the "brand image" influences the industrial transactions directly. The reason is the informants evaluated "brand image" higher while they are in the offering position but not in the purchasing situation. In other words, the industrial companies may stress their brand image to promote their products, but the customer companies may not necessarily evaluate the "brand image" in the same way.

In the hypotheses testing, H2a and H2c were accepted. According to H2a, the Taiwanese SME manufacturers might evaluate the criteria differently by what kind of product they produced. However, there is no clear meaning from the acceptance of H2c. In order to add some more insight, we divided the size of employees by ten persons into two groups, and undertook a t-test on the evaluations by each transaction situation. Table 7 is the statistical

result. From the result, we can find some significant differences on the criteria by the different size of employees. In the case of "general parts purchasing", the companies with a scale over ten employees ("bigger scale company" hereafter) pay more attention to the "quality". In the case of "service using", the bigger scale companies tended to care more about "price", "quality", "period of delivery" and "delivery on time". In the case of "customized parts offering", the bigger scale companies tended to evaluate "quality", "technology" and "on time delivery" higher.

In our questionnaire, we had asked informants about the changes in their business relationships both in the short and long run. Table 8 shows the conditions. From the data there are two main findings. (1) When the companies purchase industrial products from other companies, they tended to change their business relationships relatively. On the other hand, while they are offering products to other companies, they make efforts to keep relationships steady. (2) Excepting the "general parts" transactions, the business relationships seldom changed.

From the findings, we try to ascertain what are the factors that influence the business relationships? We divided the sample into two groups by the change of business relationships and to do a t-test on the evaluation of each criterion. Table 9 shows the results. There are two interesting findings. (1) In the case of general parts purchasing, the companies which didn't change their business relationships in the long run, evaluate "period of delivery" with a higher score. (2) In the case of general parts offering, the "brand image" helps companies to keep business relationships steady.

To summarize the statistical results, we can get six findings as below. (1) The companies in the purchasing and offering situations evaluate "price" in the same way. (2) While the companies offer their products, they tend to evaluate non-price criteria higher than in the purchasing situation. (3) In the different types of industrial products transactions, the companies evaluate each criterion in different ways. (4) The evaluations on each criterion are different by the main product that the companies deal with. (5) In the different industrial businesses, the scale of the companies may influence the evaluations. (6) In the different industrial businesses, some criteria will influence the stability of the business relationship.

According to these findings, we can make two deductions. (1) In industrial transactions, price is the common factor for all companies. However, only part of the non-price factors may work in the purchase decision making process. (2) The influence of branding in B2B is a result of transactions, but not a factor to boost transactions. From the statistical analysis, we can find companies in the offering situation evaluate brand image more aggressively in all type of products. However, when the companies are in the purchasing situation, they might not evaluate brand image in the same way. From these two deductions, we may say, the branding in B2B may have influence in some situations, but it should not be over estimated. Maybe we can comment on the supplier companies making efforts on branding, however, it is not necessarily accepted by the customer companies. Nevertheless, every successful

transaction may contribute to the supplier's brand image. For example, reasonable price, high level of technology, rapid delivery, on time delivery, widely adoption by other companies…and so on. On the other hand, the supplier's brand image may not necessarily contribute to the transactions.

LIMITATION AND DIRECTION FOR FURTHER RESEARCH

In this research we used a questionnaire to collect data and test hypotheses to ascertain the relations among factors. However there are two limitations. (1) The sample size was too small to make a proper analysis. (2) The statistical analysis may separate the facts from the context. In order to improve these two limitations, both an empirical survey and ethnographical case study are necessary.

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Appendix (the results of statistical analysis)

Table 2. T-test on the decision making criteria between purchasing and offering

criteria	T Value	probablity
price	-1.58096	0.11436
quality	-2.23940	0.02545
technology	-3.84536	0.00013
period	-4.22087	0.00003
on time	-2.11855	0.03449
relationship	-2.52976	0.01164
reference	-2.25774	0.02428
brand image	-7.48448	0.00000

Table 3: The mean of evaluations on the criteria

	Purchasing				Offering			
	general parts	customized parts	equipment	service	general parts	customized parts	equipment	service
price	5.92	5.85	6.15	5.73	6.06	6.29	6.12	5.89
quality	6.53	6.53	6.54	6.38	6.64	6.63	6.50	6.62
technology	6.05	6.32	6.31	6.24	6.49	6.51	6.42	6.50
period	5.78	6.09	5.50	5.64	6.15	6.05	6.04	6.08
on time	6.25	6.29	5.87	5.94	6.32	6.26	6.19	6.16
relationship	5.90	5.82	5.50	5.64	5.97	6.00	5.96	5.85
reference	5.04	5.19	5.02	4.91	5.37	5.33	5.42	5.20
brand image	5.40	5.25	5.60	5.46	6.19	6.26	6.19	6.15
sample size	102	68	102	102	102	73	26	102

Table 4: 2way ANOVA of criteria and exchange situations (type of products and purposes)

criteria	situations
price	0.058
quality	0.627
technology	0.492
period	0.007
on time	0.006
relationship	0.041
reference	0.622
brand image	0.949

Table 5: 2way ANOVA of criteria and characters of company

criteria	main products	position in SC	scale
price	0.00061	0.05542	0.00007
quality	0.00000	0.05644	0.00000
technology	0.00125	0.41873	0.00000
period	0.00000	0.41464	0.00009
on time	0.00000	0.44248	0.00048
relationship	0.00000	0.21801	0.00000
reference	0.00000	0.05921	0.00000
brand image	0.00109	0.44869	0.00000

Table 6. T-test of evaluations on criteria between purchasing and offering by product types

	general parts	custom ized pa	equipment	servi e
price	0.40859	0.02963	0.88534	0.36151
quality	0.28668	0.34785	0.81091	0.03052
technology	0.00153	0.18607	0.58885	0.03368
period	0.02399	0.83970	0.04953	0.00668
on time	0.57142	0.81861	0.23491	0.15494
relationship	0.66249	0.35081	0.10325	0.20799
reference	0.13934	0.60599	0.26310	0.21246
brand image	0.00004	0.00001	0.03222	0.00015

Table 7: T-test of Evaluations on each exchange situations by scale (>=10 and <10)

	GeneralParts purchase	Customized Parts Purchase	Equipment Purchase	Service purchase	General Parts offer	Custom ized Parts 0 ffer	Equipment offer	Service offer
Price	0.6381	0.2738	0.1080	0.0186	0.7213	0.4373	0.9045	0.9449
Quality	0.0189	0.2613	0.1776	0.0433	0.9665	0.0145	0.4749	0.3674
Technology	0.3474	0.7034	0.5621	0.0543	0.5127	0.0193	0.4987	0.0638
Period	0.3293	0.7715	0.1292	0.0300	0.6464	0.1531	0.8588	0.0766
On time	0.4400	0.6710	0.8048	0.0462	0.6268	0.0347	0.6123	0.3105
relationship	0.3779	0.7921	0.7680	0.7881	0.9332	0.3526	0.8306	0.3864
reference	0.9106	0.8994	0.4795	0.3712	0.5718	0.0540	0.9293	0.1751
brand-image	0.2594	0.0560	0.2274	0.6641	0.9140	0.5724	0.9665	0.6865

Table 8 C hanges in the industial business relationship

	No Change	Changed in 1-3 years	Changed in 3-10years
General Parts Purchasing	32	43	48
Customized Parts Purchasing	70	20	20
Equipment Purchasing	66	20	24
Service Using	71	20	18
General Parts 0 ffering	56	23	27
Customized Parts 0 ffering	80	11	13
Equipment 0 ffering	89	9	5
Service 0 ffering	86	10	8

Table 9 The Factors Effect on the Changing of Exchange Relations

	General Parts Purchasing			Customized Parts Purchasing			Equipment Purchasing			Service Using		
	No Change	1-3 years had been changed suppliers	3-10 years had been changed suppliers	No Change	1-3 years had been changed suppliers	3-10 years had been changed suppliers	No Change	1-3 years had been changed suppliers	3-10 years had been changed suppliers	No Change	1-3 years had been changed suppliers	3-10 years had been changed suppliers
Price	0.1604	0.4985	0.0696	0.3885	0.8505	0.2788	0.9531	0.6401	0.4257	0.9407	0.5546	0.8683
Quality	0.6036	0.9529	0.3716	0.1465	0.5242	0.5242	0.9072	0.9414	0.5356	0.4931	0.6469	0.7462
Technology	0.3095	0.2018	0.9128	0.2182	0.6372	0.1653	0.9471	0.4587	0.2482	0.5654	0.7503	0.8447
Period	0.2427	0.3188	0.0028	0.6569	0.8362	0.9493	0.5274	0.2528	0.4764	0.2544	0.5540	0.0691
On time	0.7189	0.4124	0.7487	0.5185	0.7961	0.7961	0.5684	0.2088	0.7283	0.9750	0.8652	0.3827
relationship	0.8325	0.3109	0.2447	0.3951	0.5976	0.7536	0.3536	0.8527	0.3840	0.9058	0.7580	0.9291
reference	0.3949	0.7506	0.4198	0.3796	0.5481	0.3594	0.9710	0.8110	0.8378	0.3216	0.1086	0.4786
brand-image	0.3576	0.8567	0.6468	0.7533	0.3883	0.8634	0.2326	0.5600	0.1682	0.4635	0.3887	0.7493

	General Parts Offering			Customized Parts Offering			Equipment Offering			Service Offering		
	No Relpaced	1-3 years had been replaced	3-10 years had been replaced	No Relpaced	1-3 years had been replaced	3-10 years had been replaced	No Relpaced	1-3 years had been replaced	3-10 years had been replaced	No Relpaced	1-3 years had been replaced	3-10 years had been replaced
Price	0.4935	0.8869	0.3384	0.2857	0.9463	0.5044	0.5070	0.0568	0.3744	0.2994	0.3861	0.4834
Quality	0.2333	0.2834	0.5329	0.4417	0.9711	0.5554	0.8148	0.4579	0.7663	0.2146	0.9262	0.2585
Technology	0.5081	0.4913	0.8213	0.7844	0.8122	0.1975	0.8405	0.6132	0.5678	0.7154	0.3716	1.0000
Period	0.7297	0.8855	0.8303	0.2789	0.8429	0.4031	0.5316	0.7751	0.3361	0.9381	0.2289	0.1325
On time	0.6728	0.6771	0.4885	0.6081	0.9584	0.6220	0.2565	0.2796	0.5538	0.8881	0.1175	0.2044
relationship	0.4046	0.2549	0.8076	0.8007	1.0000	0.5444	0.8547	0.6033	0.9288	0.6735	0.8830	0.9513
reference	0.6837	0.5810	0.8768	0.2865	0.7239	0.2878	0.2476	0.6295	0.4944	0.8451	0.8401	0.2872
brand-image	0.0446	0.3184	0.4716	0.7659	0.3457	0.9144	0.5889	0.3880	0.9860	0.4287	0.8787	0.4872