The use of conjoint analysis in determining preferred attributes of salary loans among employees

[1]Angelle Maye Carnecer and [2*]John Vianne Murcia
[1]Professional Schools, University of Mindanao, Davao City, Philippines
[2]College of Business Administration Education, University of Mindanao, Davao City, Philippines
**Corresponding author:* jv_murcia@umindanao.edu.ph

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ABSTRACT

When viewed by industries, knowing how clients behave leads to better business decisions. Specific tools are utilized to determine how market behaves – one of such is conjoint model. This tool was utilized in this study to model preferences for salary loans and explore utilities of attributes and their levels. A quantitative non-experimental causal method was used and involved N=200 respondents. Results showed interest rate is the most important attribute with regards to relative importance. Individually and aggregately, interest rate remains as the most important attribute for existing clients. Conjoint analysis' additive model revealed a salary loan provided by a bank with one-month payslip required, processes loan application within the day, charges 0.5 to 1% interest rate and payable within 24 months is the most preferred. The least preferred combination for existing clients is a salary loan offered by a government fiduciary institution that requires three months of payslip, processes loan application within 10 to 15 working days, charges 2% interest rate and payable within 24 months, while the least preferred combination is a salary loan provided by a bank, with one-month payslip required, processes loans within a week, charges 2% interest rate and can be paid within six months. Implications are discussed.

Keywords*: business administration; salary loan; preference; conjoint analysis; Philippines.*

INTRODUCTION

One of the inevitable things in life is availing loan. From the billionaire business tycoons to the street-smart, money-savvy entrepreneurs to the everyday employee, almost everyone needs credit at different points of our life for different reasons. There are different types of loan and one of these is salary loan. A salary loan is a cash loan granted to salaried workers or employees. It is intended to meet a person's short-term credit needs (Avena, 2016). It is also termed as payday advance, payday loan, payroll loan, short term, or cash advance loan (Bair, 2005), and is considered a small, short-term unsecured loan. This loan is offered to clients with payroll and employment records. Salary loans can also be a beneficial tool for speedily and effortlessly obtaining cash in times of an emergency if a person does not have other financial options. The hassle-free process of getting a salary loan is what makes this type of personal loan unique (Elliehausen & Lawrence, 2008; Diagne, Kurban & Otabor, 2014; Reed, 2015).

However, several concerns in having a loan were found. Salary loans are no doubt extremely expensive. It can support in unforeseen events but can leave the clients indebted for years. The short-term nature of loan offered by the creditors frequently produces a series of debt which results to many salary loan clients even more extremely indebted at large cost. Additionally, the short-term nature of these loans can trick debtors into believing that they are less costly than they are (Shapiro, 2011; Skiba, 2012; Diagne et al.,

2014). Clients find it challenging to pay back their loans because of high lending rates and charges (Kar & Swain, 2014). Interest rate, payback period, terms and conditions for making payment are the decisive factors in customer preferences for loan. Specifically, interest rate is the major factor before availing it. This is because if the interest rate is less, customers are supposed to pay less every month towards interest and pay more every month towards principal (Boyd, Leonard & White, 1994; Lee & Marlowe, 2003; Mahabir, Rani & Radhi, 2013). It was also concluded that salary loan clients base their choices on the process of application, the capability to attain speedy approvals, and the suitability of the place or location (Dawude & Zakir, 2014). Because of competition, lenders are giving their best to entice people by offering diverse schemes which are good for clients. It is the common goal for loan lenders to meet or surpass the choices of target clients with the quality of products anticipated by them.

Salary loan customers have different choices in selecting salary loan providers such as banks, cooperatives and government financial institutions to support their immediate borrowing needs. Among many institutions that authorize salary loan operations, most limit them in some ways through maximum interest rates, amount of the loan and payback periods (Bhutta, 2014). On one hand, borrowers used salary loan a minimal or moderate number of times for less than a month at a time (Bhutta, Skiba & Tobacman, 2015). Creditors limit the risks of loan by controlling the loanable amount and terms with fixed costs which can result to a high annual percentage rate (Hodson, 2003; Van Bochove & Van Velzen, 2014). It was reported that the main source of borrowing for those who borrow money is mainly informal which comprises family, relatives or friends and informal lenders (Bangko Sentral ng Pilipinas, 2015). Bank as a source of borrowing only got 4.4% which is lower than the percentage of adults who borrow from lending or financing companies (12%), cooperatives (10.5%), microfinance NGOs (9.9%) and government entities (6.1%).

In this paper, we conducted market segmentation of clients of salary loans and assessed the importance of its attributes using conjoint analysis. Salary loan attributes refer to factors which are assessed to have cardinal importance of clients or buyers and serve as bases in decision for choice. In this study, the attributes are requirements, processing time, type of provider, interest rate, and payment terms. Finally, we assess the best and least-preferred combinations of attributes.

METHOD

A non-experimental quantitative causal research design was utilized to identify how the exclusion, inclusion or extent of specific attribute/s can influence the decision of clients and to understand the importance of the various attributes of a product. We used conjoint analysis, as it has additionally been recognized to measure structures of clients' preference (Eggers & Sattler, 2009). Data collection was conducted in Digos City, the capital city of Davao del Sur province and is within Southern Mindanao Region. A total of N=200 respondents participated in the data collection, composed of salaried employees who have already availed salary loans in the past. The sample is within Orme and Huber's (2000) suggested sample size ranging 150 to 1,200 respondents. Respondents are mostly females (52.5%), are married (54.8%), with age ranging 26 to 33 (28.5%), are college graduates (72.8%), employed in private institutions (54.3%), paid with salaries ranging Php 11,000 to 25,000 (51.5%).

Respondents rated 20 possible combinations of attribute levels depicting a hypothetical design of a salary loan, generated using fractional factorial design. The purpose of this design is to meet the statistical criteria such as efficiency, and balance between the levels and subsequent part-worth estimates by reducing the number of evaluations gathered and for the preferences of clients to the five attributes to be fitted. Analysis was done using a non-metric conjoint analysis syntax in IBM-SPSS 20, while determination of best and least-preferred combination of attributes was done following the additive model, calculating the sum of the constant and the estimate of each attribute levels with the highest value.

RESULTS

The relative importance of the five determining attributes of clients' preference for a salary loan provider is presented in Table 1. Importance measures are relative and within this study. If the range of the attribute levels that were tested changes, the relative importance of that attribute will also likely to change. Conjoint analysis revealed that the interest rate is the most important attribute for the clients' preference for a salary loan (49.459%). The clients' choice can also be defined from the marginal utility assessed for every attribute level. The most important attribute level is the attribute with the highest marginal utility. Looking at its attribute levels, the existing clients generally prefer a salary loan that has 0.5 to 1% interest rate (-1.039), which is preferable than 1.5% (-2.078) and 2% interest rate (-3.116).

Table 1. *Importance of the attributes of salary loan provider (existing clients)*

Attribute	Importance Value	Attribute Level	Utility Estimate
Type of Provider	14.675	Government	-0.113
		Bank	0.056
		Cooperative	0.057
Requirement	8.437	One-month payslip	-0.094
		Three months of payslip	-0.189
Processing Time	15.746	within the day	-0.314
		one week	-0.628
		10 to 15 working days	-0.941
Interest Rate	49.459	0.5 to 1%	-1.039
		1.5%	-2.078
		2%	-3.116
Payment Term	11.683	6 months	0.214
		12 months	0.427
		24 months	0.641
(Constant)			5.300

Following interest rate is processing time (15.746%), by which existing clients prefer a salary loan that is processed within the day (-0.314). On the other hand, a salary loan that is processed within one week (-0.628) and 10 to 15 working days (-0.941) tend to be less preferred by existing clients. Meanwhile, type of provider (14.675%) ranked third and payment term (11.683%) ranked fourth in terms of relative importance.

Overall, existing salary loan clients prefer cooperative (0.057) as type of provider but surprisingly, they do not prefer the government (-0.113) which is being indicated by a negative coefficient of the marginal utility. In addition, existing clients chose a salary loan that has a longer payment term of 24 months (0.641) rather than 12 months (0.427) and 6 months (0.214). Lastly, the least important attribute of a salary loan provider among the five attributes is the requirement having a value of 8.437%. A salary loan with one-month payslip required (-0.094) is preferable rather than those with three months of payslip as requirement (-0.189).

Table 2 illustrated the preferences of individual respondents and the overall sample of existing clients towards salary loan provider. Results reveal that the overall sample of existing clients preferred

cooperative (0.057) as type of provider with one-month payslip required (-0.094), processed within the day (-0.314) having 0.5 to 1% interest rate per month (-1.039) and payable in 24 months (0.641).

For Client 2, it can be seen in the table that upon choosing a salary loan, he/she will first consider the processing time having an importance value of 38.428% while the least preferred attributes are requirement and processing time having the same importance value of 8.734%. For Client 98, the attribute with highest importance value is the interest rate per month (58.355%) while the least preferred attribute is the requirement with only 3.183% importance value rating. Client 145 has the same result with Client 2 that answered processing time is the most preferred attribute with the highest importance value of 58.235%. However, the least preferred attribute of a salary loan provider for Client 145 is the payment term (2.353%).

Table 2. *Individual and aggregate models for a salary loan of existing clients*

Attribute Levels	Client 2		Client 98		Client 145		Overall Sample	
	Imp. Value	*Utility Est.*	*Imp. Value*	*Utility Est.*	*Imp. Value*	*Utility Est.*	*Imp. Value*	*Utility Est.*
(Constant)		4.220		4.735		4.038		5.300
Type of Provider	29.69%		17.51%		16.47%		14.68%	
Government		-0.083		-0.417		0.417		-0.113
Bank		-0.458		0.333		0.292		0.056
Cooperative		0.542		0.083		-0.708		0.057
Requirement	8.73%		2.92%		6.47%		8.44%	
1-month payslip		0.375		-0.125		0.125		-0.094
3-month payslip		0.750		-0.250		0.250		-0.189
Processing Time	38.43%		3.18%		58.24%		15.75%	
Within the day		-0.386		-0.068		-0.159		-0.314
One week		-0.773		-0.136		-0.318		-0.628
10 to 15 working days		-1.159		-0.205		-0.477		-0.941
Interest Rate	14.41%		58.36%		16.47%		49.46%	
0.5 to 1%		-0.114		-1.250		-0.159		-1.039
1.50%		-0.227		-2.500		-0.318		-2.078
2%		-0.341		-3.750		-0.477		-3.116
Payment Terms	8.73%		18.04%		2.35%		11.68%	
6 months		-0.114		0.386		0.023		0.214
12 months		-0.227		0.773		0.045		0.427
24 months		-0.341		1.159		0.068		0.641

Moreover, the same table presents the analysis showing individual behaviors of clients for a salary loan. Taking Client 2, he/she prefers for a salary loan that is provided by a cooperative with three months of payslip required, processed within the day having 0.5 to 1% interest rate per month and payment term of 6 months. On the other hand, Client 98 favored a salary loan provided by bank with one-month payslip

required that is processed within the day, 0.5 to 1% interest rate per month and 24 months payment term. Lastly, Client 145 has chosen a salary loan provided by government with three months of payslip required, processed within the day, 0.5 to 1% interest rate per month and payable in 24 months.

In relation with part-worth utility model, the total utility can be identified from the combinations of part-worth utilities. This will be carried out by adding the marginal utility value of the attribute level combinations of each attribute and the value of the constant derived in the conjoint estimation. The preference model estimated can be used to calculate the total utility for the alternative product profiles. As revealed in Table 3, the highest preference for a salary loan provider is card ID 12. The combination which consists of bank as the type of provider, one-month payslip as the requirement, within the day processing time, 0.5 to 1% interest rate per month and the payment term is 24 months having an overall utility of 4.550. It is calculated by adding the constant of 5.300 + -0.094 utility for requirement, + -0.314 utility for processing time, + 0.056 utility for type of provider, + -1.039 utility for interest rate per month + 0.641 utility for payment terms. Ranking second is card ID number 13, which is a combination of the following attribute levels: bank as the type of salary loan provider with three months of payslip required that is processed within the day having 0.5 to 1% interest rate per month and payable in 12 months. On the other hand, the least preferred profile of salary loan provider attributes is card ID 4, combination of salary loan with government as type of provider, three months of payslip required, 10-15 working days processing time, 2% interest rate and 24 months payment terms.

Table 3. *Most and least preferred combinations of salary loan among existing clients*

ID	Constant	X_1	X_2	X_3	X_4	X_5	Total Utility	Rank
Card 12	5.300	-0.094	-0.314	0.056	-1.039	0.641	4.550	1
Card 13	5.300	-0.189	-0.314	0.056	-1.039	0.427	4.241	2
Card 8	5.300	-0.189	-0.628	0.057	-1.039	0.641	4.142	3
Card 2	5.300	-0.094	-0.314	-0.113	-1.039	0.214	3.954	4
Card 6	5.300	-0.189	-0.314	-0.113	-1.039	0.214	3.859	5
Card 16	5.300	-0.094	-0.941	0.057	-1.039	0.427	3.710	6
Card 5	5.300	-0.189	-0.628	-0.113	-1.039	0.214	3.545	7
Card 7	5.300	-0.094	-0.314	-0.113	-2.078	0.641	3.342	8
Card 15	5.300	-0.094	-0.941	-0.113	-1.039	0.214	3.327	9
Card 9	5.300	-0.189	-0.314	0.057	-2.078	0.214	2.990	10
Card 1	5.300	-0.094	-0.628	-0.113	-2.078	0.427	2.814	11
Card 3	5.300	-0.189	-0.941	0.056	-2.078	0.214	2.362	12
Card 11	5.300	-0.094	-0.314	0.057	-3.116	0.214	2.047	13
Card 10	5.300	-0.189	-0.314	-0.113	-3.116	0.427	1.995	14
Card 14	5.300	-0.094	-0.628	0.056	-3.116	0.214	1.732	15
Card 4	5.300	-0.189	-0.941	-0.113	-3.116	0.641	1.582	16

DISCUSSION

The preferences of the respondents for a salary loan provider were evaluated by analyzing the relative importance and utility estimate. The relative importance of an attribute will change when the range of its attribute levels varies. This is the effect of the behavior of one another specially in measuring the preference of a client. Based on the conjoint analysis, interest rate was rated to have the highest

importance value, while requirements got the lowest importance value. This means that clients pay particular attention on the interest rate of the salary loan and that the existing clients tend to be interest rate-conscious. As to specific attribute levels, clients have higher utility on salary loans payable within 24 months, while they have the least preference for salary loans with 2% interest rate per month. Interest rate is found that the attractive loans for most of the respondents are those loans with lower interest rates (Wonder, Wilhelm & Fewings, 2008). This is because if the interest rate is less, customers are supposed to pay less every month towards interest and pay more every month towards principal. Hence, the lower the interest rate, the more chance a client will avail of salary loan.

The attribute having the highest marginal utility is the most important attribute. We found out that the attribute level that is most preferred by clients is a salary loan payable in 24 months, denoting that most of the clients prefer a salary loan which is payable for an extended period of time instead of paying it for a very shorter period. We note that positive utilities indicate that the higher the number, the greater the value of importance, whilst negative utilities are indicative that that the higher the number, the lesser the relative importance. Furthermore, if a given level has negative utility, it indicates that clients tend to behave negatively or is more likely to averse in their preferences.

We observed that preferences vary with every client respondent. This is consistent Tracey and Zinman's (2008) finding in their study on credit elasticity, which stated that interest rates are given more importance by those less-constrained groups. Groups stratified through their income revealed similar but relatively weaker results. The variations in preferences have been due to each person's variations in loan demand elasticity. Moreover, the results are corollary with Wonder et al. (2008), stating that given the variety of values presented, contract duration and interest rate are the key factors of client loan preference at least among respondents. In line with the part-worth utility idea, the total utility can be determined from the combinations of part-worth utilities. The implicit part-worths or utilities are very useful in generating market models that approximates income, market share and even produ
new designs (Requena, Roa & Sayadi 2005).

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