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Factors influencing commercial bank selection choices by customers in Bhutan – an analysis using analytic hierarchy process

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Abstract: This research paper presents the most recent findings to provide a validated instrument for assessing bank customers' selection decisions in Bhutan. The study's goal was to identify and examine the main factor which was influencing the customers' choice of commercial banks in Bhutan. A convenience sampling method was used, and data were collected using a well-structured questionnaire from a sample of 150 bank customers in Thimphu. The findings revealed that one of the most important factors of customers' bank selection decisions was service delivery, followed by convenience. Bank of Bhutan Limited was ranked first with the highest global priority weight and Druk Punjab National Bank Limited was ranked last with the lowest global priority weight when determining consumers' preference of bank based on each criterion evaluated in this study.

Keywords: bank selection; customers; commercial banks; analytic hierarchy process; AHP; Bhutan.

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Biographical notes: Madan Gurung is a faculty in Finance, Mathematics and Statistics at Gedu College of Business Studies, Royal University of Bhutan. As an ardent academician and tertiary educator for over 11 years, he has also been extensively involved in developing new programmes and modules, and in reviewing the existing programmes and modules. He has also worked as a BCom Programme Leader for more than three years and Head of Entrepreneurship Division for more than two years.

1 Introduction

1.1 Background

The banking sector has emerged as a key player in today's developing and competitive world, contributing to the expansion of the economy, in development of the financial sector, and most importantly, the job creation in the country. According to Sharma et al.

(2020), the banking sectors in Bhutan are at its infancy and the banking sectors have a bigger scope for growth and development. Banks are an economy's lifeblood, the structure and strength of a country's banking industry have a direct relationship with its economy's rate of growth, and commercial banks are the most important entities, which participate directly and indirectly in financial sustainability of countries (Alvi, 2016). The banking industry is focusing more and more on marketing as a result of its critical function in the economy's resource allocation and mobilisation, which is crucial for any nation's economy to flourish properly (Joseph and Mung'atu, 2018). Moreover, a modern and competitive financial atmosphere compels banks to constantly refine their banking services and follow the latest technologies all over the world. Banks need to be customer-centric to be successful (Suki, 2018). Joseph and Mung'atu (2018) in their study found out that since the banking industry dominates the financial systems of many nations, banks have evolved into highly effective collaborators in the process of economic development.

For a country like Bhutan, with the competition in banking and non-banking institutions, it has put pressure on corporations to enhance their performance and productivity while also developing innovative ways to deliver services (Rahut et al., 2012). The banking industry in Bhutan consists of five commercial banks: Bank of Bhutan Limited (BOBL), Bhutan Development Bank Limited (BDBL), Bhutan National Bank Limited (BNBL), Tashi Bank Limited (TBankL), and Druk Punjab National Bank Limited (DPNBL). Addressing customer satisfaction in terms of banking services has become known as an important component of a bank's reputation that encourages customers to choose a bank (Suki, 2018). Thus, the study of commercial bank selection has become of absolute importance, as Bhutanese customers have consistently assigned a significant amount of weight to its services when choosing the commercial banks in Bhutan (Khan et al., 2021). Customer retention has been identified as an important factor in sustainability in the market, which provides a huge competitive advantage in their business. This has been the determining factor for the customers in selecting the bank of their choice as the quality of managing and tracking the consistency of customer relationships continue to rise. Hence identifying these crucial factors considered by the customers to choose a bank has become increasingly vital for all the banks.

From the various studies conducted on similar topics across many countries include Al-Shammari and Mili (2019) on customers' choice of the bank using the fuzzy analytic hierarchy process in the Kingdom of Bahrain; Kaur and Arora (2019) have critically examined the influences of the demographic factors on the decisions of the consumer in the banking industry in India; and in Singapore, Ta and Har (2000) have studied on bank selection decisions by employing analytic hierarchy process (AHP) approach. Similarly, in the USA, Lee and Marlowe (2003) have attempted to analyse how consumers choose financial institutions with the use of decision-making criteria. Similarly, Almossawi in 2001 has conducted a similar study on college students, while Denton and Chan (1991) explored bank selection criteria of multiple bank users in Hong Kong. Moreover, in Pakistan, Awan and Bukhari (2011) conducted a study on customer's criteria for selecting an Islamic bank.

Similarly, this study was designed to determine the bank attributes factors influencing customers' choice of commercial banks in Bhutan. This study carefully investigates the primary factors while selecting a bank by the customer using AHP. AHP is a metacriterion decision-making approach (Saaty, 1998).

1.2 Problem statement

The time has come for the banks to recognise the most important factors which influence how the customers choose their banks as the banking industry is becoming increasingly competitive and their services becoming more comparable (Holstius and Kaynak, 1995). According to Lee et al. (2021), the financial technology (Fintech) has become a significant part of the services offered by the banks as it enables banks to offer services like paperless lending and borrowing, mobile banking, digital payments, mobile wallets, insurance, etc. Fintech has completely transformed the conventional way of banking system in all its aspects. By the same token, for a developing country like Bhutan, the tougher competition in the banking industry creates pressure on the financial institution to ameliorate their performance and efficiency consistently and create more ways to deliver financial services (Rahut et al., 2012). Accordingly, due to such competition, customers are expected to have an infinite number of banks switching options.

For this reason, the focus of this study was on gaining a better understanding of customers' banking preferences so that banks can identify and make use of effective marketing strategies and attract new customers and also maintaining the existing ones.

1.3 Research questions

This research will try to answer the following questions:

Question 1 Which factor plays a more important role while choosing a bank?

Question 2 Which bank is preferred by customers based on the criteria assigned?

1.4 Research significance

The study will try to discover factors that influence customers' decision to select a bank in Bhutan, which will immensely help all banks in Bhutan to pinpoint the major factors that can affect the customers' bank selection decision. The findings will assist the decision makers in the banks in fostering exact marketing strategies for retaining as well as attracting customers. The other important message the researcher would like to convey through this study is how important AHP is in bank marketing which allows the banks to exactly highlight the factor which customers are looking for in selecting a bank of their choice.

2 Literature review

Choosing the right kind of bank is very important and this is usually a long-term commitment for the customer as it is inconvenient to change a bank from time to time. The decision is usually made based on the customer's individual preferences and is influenced by the bank's competitive strength (Al-Shammari and Mili, 2019). Customers' bank preference is influenced by a variety of factors, according to Almosawi (2001). Numerous studies have endeavoured to pinpoint the important factor(s) which are considered by the customers while selecting a bank.

Kaynak et al. (1991) in their study found that the length of the distance between the bank and their home and work was the most significant factor in their decision to choose a bank. Additionally, Lee and Marlowe (2003) examined the variables that households in the United States used to make bank selection decisions. The researchers discovered that a convenient location to home was the most important factor. Moreover, Siddique (2012) surveyed Rajshahi, Bangladesh, and found that the convenience of location was one of the most important factors that customers considered when choosing a bank.

According to the study conducted by Suki (2018) in Malaysia, it was found that the three most important factors which significantly affect customers' decisions when choosing banks were bank services, customers' influence, and banking security. However, customers' influences scored the highest in determining customers' choice of bank. Almossawi (2001) found even though young customers make their independent decision to choose a bank, recommendations of their friends and relatives were important too. In contrast to the preceding statement, Tehulu and Wondmagegn (2014) discovered that people's influence and service charges had no substantial impact on bank selection. Abbam et al. (2015) observed in the present day's extremely competitive business world, status and fame are the driving factors that determine customers' decisions for banking services.

Another criterion for selecting a bank was the age of the head of the family, as studied by Boyd et al. (1994). They discovered that for people under the age of 21, a bank's reputation is a big factor in choosing which bank to use. On the other hand, the affable nature of the people working in the bank, as well as the contemporary design of its facilities, was found to be trivial. A study conducted by Kennington et al. (1996) in Poland, Edris and Almahmeed (1997) in Kuwait and Kaur and Arora (2019) in India indicated the reputation of the bank as the driving factor that determined the customers' choice of a bank. This indicated a bank's perceived reputation and status were most significant in considering a bank by the customers (Narteh and Owusu-Frimpong, 2011).

The banking sector has seen rapid growth and it has attributed to efficient service delivery to its customers (Abbam et al., 2015) and efficiency was pointed as the single most pivotal factor by Ltifi et al. (2016) could elucidate bank selection decisions. It was also noted from the same study that other factors such as physical climate, the relationship between bank's employees and customers, and corporate identity were other variables that determined the bank selection by the customers. Furthermore, indicators such as efficient service and trustworthiness were also influencing the choice of the bank (Kaynak et al., 1991). Following the COVID-19 outbreak, users have noticed a new approach to conduct banking online and the global COVID-19 pandemic has been widely credited for the recent emergence of online banking in Bhutan (Khan et al., 2021). As per their findings, respondents listed the quality of the service and receptiveness of the staff almost consistently in all the cases, which is also in line with the findings of Gerrard and Cunningham (2001). Khan et al. (2021) argued that the ability of the bank to supply quick and improved online services during the lockdown has been an even more crucial consideration for them when choosing a bank.

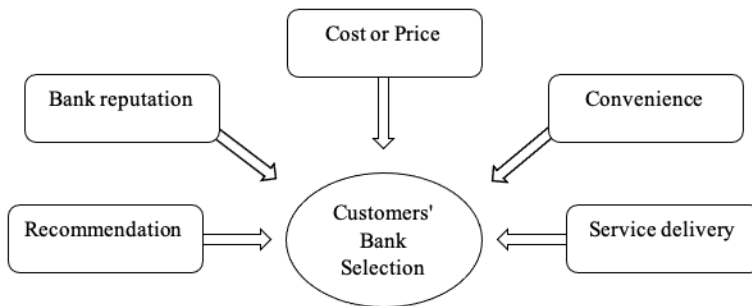
Through the study conducted by Ta and Har (2000) in Singapore and Al-Shammari and Mili (2019) in Bahrain using AHP discovered that service charges and rate of interests on loans were important factors that influenced the choice of the banks by the customers, although customers use banks facilities to fulfil many other purposes.

2.1 Conceptual framework

Based on the various pieces of literature that were reviewed, the researcher has identified potential factors which influence customers' bank selection as a recommendation, bank reputation, convenience, service delivery, and cost or price factor, which are illustrated in Figure 1.

- *recommendation*: the impact of another person's opinions on another person's choices, generally family members, friends, or teachers (Suki, 2018)
- *bank reputation*: bank reputation refers to an image, institutional stability, continuity, corporate soundness in selecting bank decisions (Kennington et al., 1996)
- *convenience*: as stated by Almosawi (2001), convenience is related to the locations of the banks and availability of parking facilities, the proximity of ATMs to home, and the hours of operations
- *service delivery*: it is in terms of service quality which bank assist to customers like easy deposit and withdrawal at different branch locations in selection decision (Arora and Kaur, 2019)
- *cost or price*: it describes the selection of banks in terms of low rate of interest on loans, high interest on deposits, and low service charges (Kennington et al., 1996).

Figure 1 Conceptual framework



3 Methodology

3.1 Research design

The study was done from the Thimphu district from where the participants were selected from customers of five commercial banks. Thimphu was selected as most of the banks' customers are present in Thimphu. Also, the headquarter of all the banks are in Thimphu. As a result, it was convenient while collecting data. For sample size, five banks under the Thimphu District were considered; BOBL, BNBL, BDBL, TBankL, and DPNBL. The total eligible population was 80,236 and the sample size was determined using the Taro Yamane method.

$$n = \frac{N}{[1 + N(e)^2]} \text{ (Yamane, 1967)}$$

where

n signifies sample size

N signifies population under study

e signifies margin of error (it could be 0.10, 0.05 or 0.01).

$$n = \frac{80,236}{[1 + 80,236(0.05)^2]}$$

$$n = 399$$

Furthermore, the sample size of 399 was divided by 5, to collect an equal amount of data from each bank under the Thimphu District. It comes to around 80 participants from each bank. In this study, 425 questionnaires were distributed, with 382 of them returned, yielding an 89.88% response rate. However, only 150 of the 382 questionnaires (37.5 % of the sample size) were used for analysis because they were completed following the instructions provided. When compared to a prior study on bank selection decisions by Laroche and Rosenblatt (1986), where a total of 400 questionnaires were sent, with 142 being returned and regarded good, this sample size was satisfactory.

A convenience non-probability sampling method was used to carry out this research. The questionnaires were distributed to the customer of each bank under the Thimphu district according to the convenience of the researchers.

Table 1 Proportionate sample size

<i>Name of bank</i>	<i>Proportionate sample size</i>
BOBL	30
BNBL	30
BDBL	30
TBankL	30
DPNBL	30
Total	150

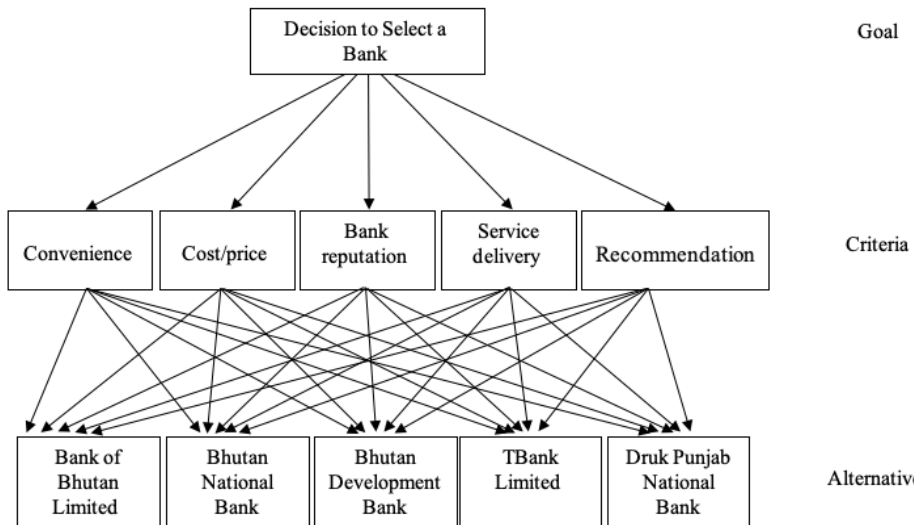
3.2 Analytic hierarchy process

In the AHP, a decision problem is disintegrated into a hierarchical process. Hence, disintegrating the choice of the customers comprises of structuring of the hierarchy of the objectives, such as the decision to choose a bank from many different banks. It is followed by selecting criteria and finally selecting the decision alternatives, or the preference from various other options (Ta and Har, 2000). It involves forming an overall goal of the study, followed by defining and determining the factors which customers consider important while selecting a bank. Finally, alternatives are ranked based on the weights obtained. A literature review was done on the customers' choice of banks to determine the factors, and only the ones which were found to be influencing the most were selected based on the various pieces of literature. Form among these factors, the five

most influencing factors were selected, which are grouped under the criteria section in Figure 2.

Following the identification of the most influential criteria in bank selection, an appropriate location and respondents were chosen to carry out this research. There are five commercial banks in Bhutan, and because all of them have their headquarters in Thimphu, which are almost next to each other, it was convenient to conduct the research there, and the participants were chosen to be the residents of Thimphu. This research included all five commercial banks (BOBL, BNBL, BDBL, DPNBL, and TBankL). The decision hierarchy for the selection of a bank, based on five criteria and five decision alternatives (banks), is illustrated in Figure 2.

Figure 2 Decision hierarchy for a selection of a bank



Source: Ta and Har (2000)

Using the AHP methodology in a decision problem involves four steps (Saaty, 1998):

- decomposed the problem into a hierarchy
- conducting a pairwise comparison
- synthesise the result (to obtain the overall ranking of alternatives to the goal)
- evaluate the consistency of the judgements.

A nine-point scale was used, as proposed by Saaty (1998) for analysing the respondents' judgement. Each criterion is provided with weight, from 1–9 based on the choice provided by the customers. However, if a criterion is compared with the same criteria, then a score of 1 is assigned to it. Thus, for the mentioned example, a two-by-two matrix is obtained and its elements will be $A_{11} = 1$, $A_{12} = 9$, $A_{21} = 1/9$, and $A_{22} = 1$. The example of a matrix obtained is presented in Table 2.

Table 2 Matrix

	<i>Services delivery</i>	<i>Reputation</i>
Services delivery	1	9
Reputation	1/9	1

Consistency is an important factor in AHP. This is important to check the consistency of their opinions and choices provided. Pairwise comparisons for all alternatives are made and the perceived relative importance between each alternative in the pairs should be consistent. If the responses are not consistent, the AHP results cannot be considered according to Saaty (1998). When consistency ratio (CR) is 10% or more, ($CR \geq 10\%$) test responses are considered inconsistent to be reliable and hence, the subsequent analysis becomes insignificant for making the decision based on AHP. Consistency of the responses is important as inconsistent comparisons indicate that respondents did not understand the differences in the options provided or do not judge the criteria accurately to assess the relative importance of each criterion provided (Saaty, 1998). However, lack of attention while providing the judgement for the criteria can also be the reason for the inconsistency. The pair-wise comparisons using ratio-scale ranges from 1–9 for measuring the respondents’ responses. The standard preference scale, used in the AHP method is provided in Table 3.

Table 3 Preference scale for pairwise comparisons

<i>Preference level</i>	<i>Numerical value</i>
Equally preferred	1
Equally to moderately preferred	2
Moderately preferred	3
Moderately to strong preferred	4
Strongly preferred	5
Strongly to very strongly preferred	6
Very strongly preferred	7
Very strongly to extremely preferred	8
Extremely preferred	9

Source: Saaty (1998)

Consistency index (CI) for AHP is calculated with the help of the formula, proposed by Saaty (1998):

$$CI = \frac{\lambda_{\max} - n}{n - 1} \tag{1}$$

$$\lambda_{\max} = \sum w_i \cdot c_i \tag{2}$$

After acquiring the consistency index (CI), the next step is to calculate the consistency ratio (CR) with the following formula developed by Saaty (1998):

$$CR = \frac{CI}{RI}$$

Description:

n number of items compared

w_i weight

c_i sum of column

CR consistency ration

CI consistency index

RI average random consistency index.

RI values can be observed in Table 4. The RI values after the tenth observations remain almost the same as the tenth observations (negligible difference).

Table 4 Random consistency index

N	1	2	3	4	5	6	7	8	9
RI	0	0	0.58	0.90	1.12	1.24	1.32	1.41	1.45

Source: Tošović-Stevanović et al. (2020)

4 Results and discussion

4.1 Demographic profiles of the respondents

Table 5 presents a summary of the demographic characteristics of respondents. The data showed that the majority of respondents were female (62%) and male respondents were 36.7%. The remaining 1.3% refused to reveal their gender. The distribution of respondents by age group showed some variation with 46.7% of respondents being between the ages of 30-49, while 44% were between the ages of 16-29. This indicated that the majority of the responses were from young adults. The respondents with an education level of bachelor's degree and above dominated the sample (66.7%), while secondary education accounted for 26%. Only 0.7% of the respondents had no formal education, whereas, 6.7 % had basic education. Since the majority of the respondents were well educated, it is safe to infer that they fully comprehended the rationale for picking one bank over the other. Approximately 43% of the sample earned between Nu. 20,000–30,000 per month while 11.3% of respondents earned less than Nu. 10,000 per month. A total of 343 accounts were held by 150 respondents among the five commercial banks. Out of which 37.02% were with BOBL, subsequently, 21.28% respondents had BNBL account, 11.95% were with BDBL, followed by TBankL with 14.28% and 15.45% were with DPNBL. The majority of respondents (about 64.7 %) had used bank services for more than six years, whereas a small portion of the respondents (0.7%) had used bank services for less than a year.

Table 5 Demographic profiles of the respondents

<i>Variable</i>	<i>Items</i>	<i>Frequency</i>	<i>Percent</i>
Gender	Male	55	36.7
	Female	93	62
	Preferred not to say	2	1.3
Age	16–29	66	44
	30–49	70	46.7
	50–69	11	7.3
	Above 69	3	2
Educational level	No formal education	1	0.7
	Basic education	10	6.7
	Secondary education	39	26
	Bachelor and above	100	66.7
Income level	Below Nu. 10,000 per month	17	11.3
	Between Nu. 10,000–20,000 per month	30	20
	Between Nu. 20,000–30,000 per month	65	43.3
	Above Nu.30,000	38	25.3
Type of bank	BOBL	127	37.02
	BNBL	73	21.28
	BDBL	41	11.95
	TBankL	49	14.28
	PNBL	53	15.45
Length of bank usage	Less than a year	1	0.7
	Between 1–3 years	14	9.3
	Between 4–6	38	25.3
	More than 6 years	97	64.7

Source: Survey

4.2 The decision hierarchy's priority indicators

The responses from the customers were gathered on the five criteria under consideration for careful examination by the researcher. The criteria were prioritised by assigning the weights obtained. The details of the weights for prioritisation for selection of criteria and alternatives are provided in Table 6. The decision hierarchy for both criteria and alternatives are obtained consequently. The criteria selection priorities provide relative importance to the five criteria while selecting a bank, and the alternatives selection priorities represent the relative preference of the five banks for each of the five criteria.

- *Criterion weight:* the criterion weight indicates how important a selection criterion is in comparison to other factors. Each selection criterion is given a positive weight, which adds up to one (Saaty, 1998).

- *Consistency ratio (CR)*: it is the degree to which the perceived relationship between elements in the pairwise comparison is maintained. In other words, it shows the consistency of the judgement made by the respondents (Saaty, 1998).
- *Alternative weight*: the weight represents which bank is preferred by the respondents based on a particular criterion (Saaty, 1998).
- *Global weight*: the weight was mainly calculated in ordered to see the overall preference of the banks by the customers based on the five criteria (Saaty, 1998).

Table 6 The decision hierarchy's priority indicators

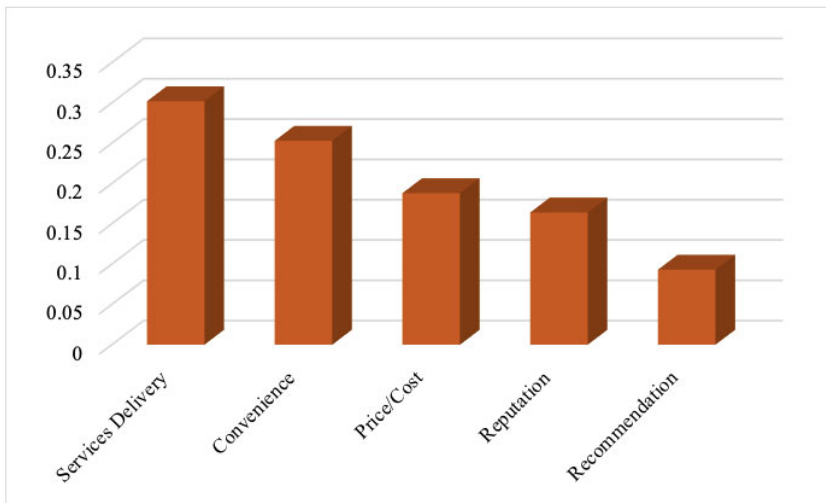
<i>Criteria</i>	<i>Criterion weight</i>	<i>Alternatives</i>	<i>Alternatives CR</i>	<i>Alternatives weight</i>	<i>Global weight</i>
Service delivery	0.302	BOBL	0.03	0.368	0.111
		BNBL		0.282	0.085
		TBankL		0.145	0.044
		DPNBL		0.092	0.028
		BDBL		0.112	0.034
Reputation	0.164	BOBL	0.034	0.393	0.064
		BNBL		0.109	0.018
		TBankL		0.286	0.047
		DPNBL		0.122	0.02
		BDBL		0.091	0.015
Convenience	0.253	BOBL	0.021	0.398	0.101
		BNBL		0.269	0.068
		TBankL		0.121	0.031
		DPNBL		0.085	0.022
		BDBL		0.127	0.032
Price/Cost	0.188	BOBL	0.013	0.255	0.048
		BNBL		0.288	0.054
		TBankL		0.193	0.036
		DPNBL		0.123	0.023
		BDBL		0.141	0.027
Recommendation	0.093	BOBL	0.017	0.368	0.034
		BNBL		0.274	0.025
		TBankL		0.125	0.012
		DPNBL		0.098	0.009
		BDBL		0.135	0.013
Criteria CR	0.01				

Source: Survey

4.2.1 Interpretation of selection criteria

The criteria selection finding was examined to address the first objective, which was to determine the factors that customers consider important when choosing a bank. According to the criteria selection weight, the two most important factors influencing consumers' bank selection decisions were quality of service delivery and convenience, followed by the bank's reputation, the price or cost of the bank's products and services, and third-party recommendation. In specific, respondents (customers) prioritised service delivery (weight = 0.302) over other factors, with the recommendation from a third-party (weight = 0.093) being the least important factor when choosing a bank. The consistency ratio for criteria selection was 0.01, within the acceptable range of 0.10 (Saaty, 1998). The quality of service delivered (weight = 0.302) was considered more important and ranked first compared to other factors by the customer while selecting a bank. The finding coincided with the research conducted in Tunisia in 2016, where it was found that customers considered the quality of services offered by the financial institutions more important while selecting any bank (Ltifi et al., 2016). Furthermore, in the study conducted by Siddique (2012), crucial factors influencing the selection of the bank to the customers were the effective customer services, an array of services that are offered by the banks and low rates of interest in their products. Additionally, the quality of the services was highlighted from the studies conducted by Katircioglu et al. (2011), Hedayatnia and Eshghi (2011) and Dusuki and Abdullah (2007) which was influencing the selection of the banks by the customers.

Figure 3 Criterion rank (see online version for colours)



Source: Survey

Among the five factors considered in this study, convenience (weight = 0.253) was ranked second. This finding was consistent with the findings of Arora and Kaur (2019), Lee and Marlowe (2003) and Almossawi (2001), who showed that factors such as parking space availability, bank location, ATM placement, and branch office location were all considered important when choosing a bank. The following two variables, price or cost (weight = 0.188) and reputation (weight = 0.164) were given nearly equal

importance and almost equal weight. The reason for the two factors to be scored almost equal could be customers preference to choose the bank based on the bank’s performance which can be measured by its current situation and image (reputation), the interest rate charged on loans, affordable, reasonable service charges (Shafee et al., 2017).

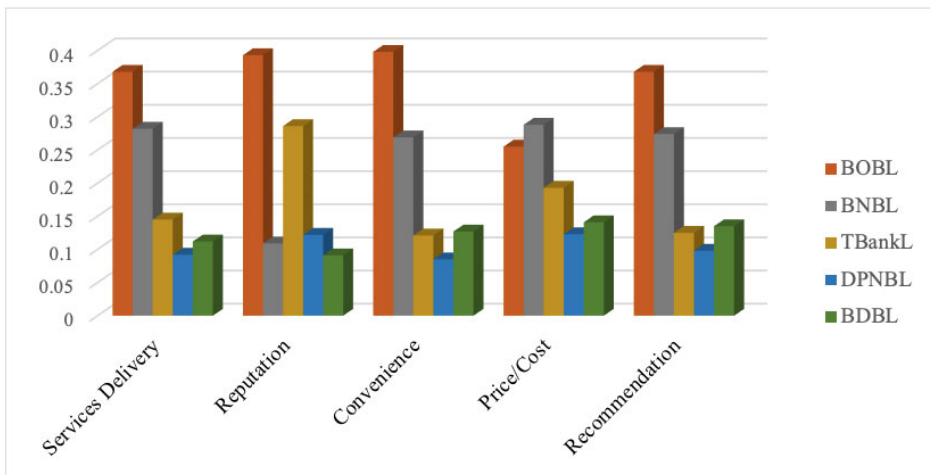
However, the recommendation from a third party (weight = 0.093) was considered the least important factor for bank selection and thus ranked last. This finding was related to Ta and Har’s (2000) study on bank selection decisions in Singapore using the AHP, which concluded that the most important factor considered was the high-interest rate on saving accounts and the least important factor was a recommendation from friends and family while selecting a bank.

4.2.2 Interpretations of decision alternatives

To address the second objective of determining customers’ preference of banks based on each factor or criteria considered in this study, the alternative selection findings were carefully investigated. From the priorities of the banks presented in Table 6, out of five criteria, Bank of Bhutan Limited (BOBL) was the most preferred bank in four criteria. These criteria were service delivery (weight = 0.368), reputation (weight = 0.393), convenience (weight = 0.398), and recommendation (weight = 0.368). On the other hand, Bhutan National Bank Limited (BNBL) is the most preferred bank for one criterion which is price or cost (weight = 0.288).

However, from the priorities of the banks in Table 6, Druk Punjab National Bank Limited (DPNBL) was the least preferred bank for four criteria out of five selected criteria. These criteria were service delivery (weight = 0.092), convenience (weight = 0.085), price or cost (weight = 0.123), and recommendation (weight = 0.098). However, Bhutan Development Bank Limited (BDBL) was the least preferred bank in terms of bank reputation (weight = 0.091).

Figure 4 Bank rankings based on the five criteria



Source: Survey

To achieve the priorities of criteria selection and alternatives for the sample, the geometric means of the pairwise comparisons provided by the respondents were analysed. These geometric means were then used as inputs in the pairwise comparison matrix of criteria selection and the five pairwise comparison matrices of alternative selection (Appendix represents the input matrix).

4.2.3 Final synthesis – global priorities

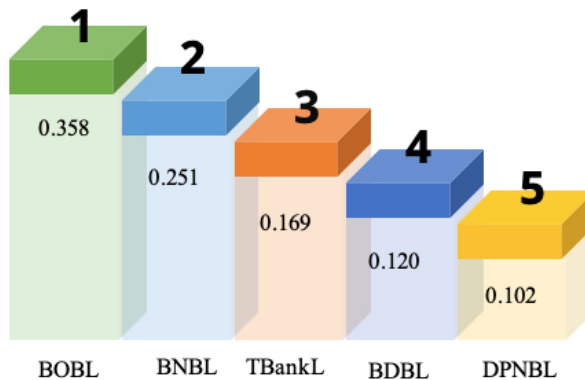
To address the customers' overall choice of the banks, the priorities were synthesised. The global priorities of the banks are presented in the last column of Table 6. The global priority for each bank can be calculated by multiplying the criteria weight for all the five attributes with a particular bank's alternative weight and sum up all the results. For instance, the global priority for Bank of Bhutan Limited (BOBL) is the sum of the products of the criteria weight and the BOBL's weight in alternatives. In other words, the global priority for Bank of Bhutan Limited (BOBL) = $(0.302) * (0.368) + (0.164) * (0.393) + (0.253) * (0.398) + (0.188) * (0.255) + (0.093) * (0.368) = 0.358446$. Table 7 shows the global priority weight of each bank and the rank they obtained based on the weight. The services offered by the bank were found to be one of the most crucial factors in determining the bank that customers choose. This finding is similar to that of a study by Pradhan and Murari (2019) and Suresh et al. (2019), who claimed that the BOBL's performance was significantly better than that of other banks and BOBL was the most preferred bank in Bhutan.

Table 7 Overall bank preference

Bank name	Global priority weight	Rank
BOBL	0.358	1
BNBL	0.251	2
TBankL	0.169	3
BDBL	0.12	4
DPNBL	0.102	5

Source: Survey

Figure 5 Global priority weight (see online version for colours)



Source: Survey

4.3 *Managerial implications*

Due to the competitive environment in Bhutan's banking business, banks must evaluate their strategy in light of the most significant variables considered by customers while choosing a bank. To examine the managerial implications of the result, the findings were analysed. In the present study, the most important criteria relate to the bank's service delivery when compared to other criteria. The quality-of-service delivery was considered most important and ranked first. The implication is that while choosing a bank, customers assess the quality of services provided by the particular bank.

The second most important criteria relate to convenience. It appeared that, in respect of carrying out banking transactions, the parking space availability, bank location, ATM placement places were also considered important by customers while selecting a bank.

The third most important criteria relate to the reputation of the bank and price or cost (interest rate charged on loans, affordable, reasonable service charges, and fees) were considered equally important while choosing a bank.

Predominately, it is important to understand the choices of the bank customers and develop strategies that are targeted to their demands. In this line, the findings of this study are beneficial to bank managers as it provides information regarding the importance of the selection criteria. Moreover, the finding suggested that commercial banks in Bhutan should concentrate their efforts on improving service delivery to attract new customers as well as retain old customers.

The AHP's consumer preference modelling could play an important role in bank marketing in the banking industry. The AHP's ability to synthesise multi-attributes preferences would help bank managers in understanding customers' perceptions about their banks. The AHP-based paradigm provides a manager with a systematic framework for decisions making by incorporating both objective and subjective criteria.

5 **Conclusions**

This study analysed the factors that bank customers consider important while selecting a bank using the AHP method. The factors considered were reputation, convenience, recommendation, service delivery, and cost or price, which were derived from the various pieces of literature. These factors were compared with each other using a nine-point fundamental scale of Saaty (1998) to find out the most preferred factor by the customers while selecting a bank. Furthermore, the five banks (BOBL, BNBL, BDBL, DPNBL, TBankL) were compared with each other based on the five factors mentioned above.

After analysing the data, it was found that the quality of service delivered by the bank was considered the most important factor, followed by convenience, cost or price, reputation, and recommendations from third-party were the least important factor while selecting a bank. This study aligns with the earlier study done by Joseph and Mung'atu (2018) where the selection of the banks by customers is largely influenced by its services, convenience, and its services. According to Khan et al. (2021), the most crucial aspect that influences both customer pleasure and loyalty is service quality, which is consistent with the findings of this study. Moreover, after comparing the banks based on each criterion, it was found that the overall preference of the customers was BOBL, followed by BNBL, TBankL, BDBL, and DPNBL.

6 Limitations

The study drew conclusions based on the responses drawn from the tertiary learners of Bhutan. Therefore, the findings of this study may not be generalised for the entire nation. The future researcher(s) may include other segments of the populations for future study. The future researcher(s) can also specialise their study based on the expectations of the customers pertaining to the new banking technologies (Fintech) that the banks should adopt.

References

- Abbam, A., Dadson, I. and Say, J. (2015) 'An empirical analysis of customer choice of banks in Ghana', *European Journal of Business and Management*, Vol. 7, No. 12, pp.49–55 [online] <https://www.iiste.org/Journals/index.php/EJBM/article/view/21834#:~:text=It%20was%20found%20that%20the> (accessed 8 October 2021).
- Almossawi, M. (2001) 'Bank selection criteria employed by college students in Bahrain: an empirical analysis', *International Journal of Bank Marketing*, Vol. 19, No. 3, pp.115–125, <https://doi.org/10.1108/02652320110388540>.
- Al-Shammari, M. and Mili, M. (2019) 'A fuzzy analytic hierarchy process model for customers' bank selection decision in the Kingdom of Bahrain', *Operational Research*, <https://doi.org/10.1007/s12351-019-00496-y>.
- Alvi, M.H. (2016) *The Role of Commercial Banks in the Development of Economy*, <https://DOI:10.13140/RG.2.2.11014.57926>.
- Arora, S. and Kaur, H. (2019) 'Exploring the bank selection criteria in India: scale development and validation', *International Journal of Bank Marketing*, Vol. 37, No. 3, pp.666–690, <https://doi.org/10.1108/ijbm-09-2017-0199>.
- Awan, H.M. and Bukhari, K.S. (2011) 'Customer's criteria for selecting an Islamic bank: evidence from Pakistan', *Journal of Islamic Marketing*, Vol. 2, No. 1, pp.14–27, <https://doi.org/10.1108/17590831111115213>.
- Boyd, W.L., Leonard, M. and White, C. (1994) 'Customer preferences for financial services: an analysis', *International Journal of Bank Marketing*, Vol. 12, No. 1, pp.9–15.
- Denton, L. and Chan, A.K.K. (1991) 'Bank Selection Criteria of Multiple Bank Users in Hong Kong', *International Journal of Bank Marketing*, Vol. 9, No. 5, pp.23–34, <https://doi/10.1108/02652329110007129/full/html>.
- Dusuki, A.W. and Abdullah, N.I. (2007) 'Why do Malaysian customers patronise Islamic banks?', *International Journal of Bank Marketing*, Vol. 25, No. 3, pp.142–160, <https://doi.org/10.1108/02652320710739850>.
- Edris, T.A. and Almahmeed, M.A. (1997) 'Services considered important to business customers and determinants of bank selection in Kuwait: a segmentation analysis', *International Journal of Bank Marketing*, Vol. 15, No. 4, pp.126–133, <https://doi.org/10.1108/02652329710189393>.
- Gerrard, P. and Cunningham, J.B. (2001) 'Singapore's undergraduates: how they choose which bank to patronise', *International Journal of Bank Marketing*, Vol. 19, No. 3, pp.104–114, <https://doi.org/10.1108/02652320110388531>.
- Hedayatnia, A. and Eshghi, K. (2011) 'Bank selection criteria in the Iranian retail banking industry', *International Journal of Business and Management*, Vol. 6, No. 12, <https://doi.org/10.5539/ijbm.v6n12p222>.
- Holstius, K. and Kaynak, E. (1995) 'Retail banking in Nordic countries: the case of Finland', *Article in International Journal of Bank Marketing*, Vol. 13, No. 8, <https://doi.org/10.1108/02652329510098873>.

- Joseph, N. and Mung'atu, J. (2018) 'Identifying factors influencing selection of banks by customers in Rwanda: principal components analysis approach', *International Journal of Sciences: Basic and Applied Research (IJSBAR)*, Vol. 39, No. 1, pp.229–247.
- Katircioglu, S.T., Fethi, S., Unlucan, D. and Dalci, I. (2011) 'Bank selection factors in the banking industry: an empirical investigation from potential customers in Northern Cyprus', *Acta Oeconomica*, Vol. 61, No. 1, pp.77–89 [online] <https://www.jstor.org/stable/41318018> (accessed 13 September 2021).
- Kaur, H. and Arora, S. (2019) 'Demographic influences on consumer decisions in the banking sector: evidence from India', *Journal of Financial Services Marketing*, Vol. 24, Nos. 3–4, pp.81–93. <https://doi.org/10.1057/s41264-019-00067-4>.
- Kaynak, E., Küçükemiroglu, O. and Odabasi, Y. (1991) 'Commercial bank selection in Turkey', *International Journal of Bank Marketing*, Vol. 9, No. 4, pp.30–39, <https://doi.org/doi/10.1108/02652329110004249/full/html>.
- Kennington, C., Hill, J. and Rakowska, A. (1996) 'Services used and factors considered important in selecting a bank: an investigation across diverse demographic segments', *International Journal of Bank Marketing*, Vol. 14, No. 4, pp.35–55, <https://doi.org/10.1108/02652329610119283>.
- Khan, S.A., Epoc, F., Gangwar, V., Ligor, T.A.A. and Ansari, Z.A. (2021) 'Will online banking sustain in Bhutan post COVID-19? A quantitative analysis of the customer e-satisfaction and e-loyalty in the Kingdom of Bhutan', *Transnational Marketing Journal*, Vol. 9, No. 3, pp.607–624 [online] <https://ideas.repec.org/a/mig/tmjrn/v9y2021i3p607-624.html>.
- Laroche, M. and Rosenblatt, J.A. (1986) 'Services used and factors considered important in selecting a bank: an investigation across diverse demographic segments', *International Journal of Bank Marketing*, Vol. 4, No. 1, pp.35–55, <https://doi.org/10.1108/eb010771>.
- Lee, C-C., Li, X., Yu, C-H. and Zhao, J. (2021) 'Does fintech innovation improve bank efficiency? Evidence from China's banking industry', *International Review of Economics & Finance*, Vol. 74, No. 1, ScienceDirect, <https://doi.org/10.1016/j.iref.2021.03.009>.
- Lee, J. and Marlowe, J. (2003) 'How consumers choose a financial institution: decision-making criteria and heuristics', *International Journal of Bank Marketing*, Vol. 21, No. 2, pp.53–71, <https://doi.org/10.1108/02652320310461447>.
- Ltifi, M., Hikkerova, L., Aliouat, B. and Gharbi, J. (2016) 'The determinants of the choice of Islamic banks in Tunisia', *International Journal of Bank Marketing*, Vol. 34, No. 5, <https://doi.org/http://dx.doi.org/10.1108/IJBM-11-2014-0170>.
- Narteh, B. and Owusu-Frimpong, N. (2011) 'An analysis of students' knowledge and choice criteria in retail bank selection in sub-Saharan Africa', *International Journal of Bank Marketing*, Vol. 29, No. 5, pp.373–397, <https://doi.org/10.1108/0265232111152909>.
- Pradhan, A. and Murari, K. (2019) 'Performance evaluation of banks in Bhutan: an application of balanced scorecard approach', *IUP Journal of Bank Management*, Vol. 18, No. 1, pp.49–63 [online] <https://web.s.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=4&sid=1fb9cd0b-659b-4892-b560-d6fb1017c252%40redis>.
- Rahut, D.B., Castellanos, I.V. and Sahoo, P. (2012) 'Performance of financial institutions in Bhutan', *Asia-Pacific Development Journal*, Vol. 19, No. 1, pp.97–138, <https://doi.org/10.18356/6a15f76c-en>.
- Saaty, T.L. (1998) *What Is the Analytic Hierarchy Process (AHP)?*, <https://doi.org/3.0.CO:2-Q>>[https://doi.org/10.1002/\(SICI\)1099-1360\(199711\)6:6<324::AID-MCDA167>3.0.CO:2-Q](https://doi.org/10.1002/(SICI)1099-1360(199711)6:6<324::AID-MCDA167>3.0.CO:2-Q).
- Shafee, N.B., Suhaimi, S., Hashim, H. and Mohamed, Z.S. (2017) 'Customer preferences in selecting commercial bank in Malaysia', *Advanced Science Letters*, Vol. 23, No. 11, pp.10925–10928, <https://doi.org/10.1166/asl.2017.10188>.
- Sharma, P.P., Khan, S.A. and Thoudam, P. (2020) 'Perception of banking products among people: evidence from Bhutan', *Delhi Business Review*, Vol. 21, No. 1, pp.13–21, <https://doi.org/10.51768/dbr.v21i1.211202012>.

- Siddique, N-E-A. (2012) 'Bank selection influencing factors: a study on customer preferences with reference to Rajshahi City', *Asian Business Review*, Vol. 1, No. 1 [online] <http://publicationslist.org/data/abr/ref-39/ABR%20Vol1%20Issue%201%20NAS.pdf> (accessed 21 September 2021)
- Suki, N.M. (2018) 'Criteria for choosing banking services: gender differences in the university students' perspective', *International Journal of Social Economics*, Vol. 45, No. 2, pp.300–315, <https://doi.org/10.1108/ijse-12-2016-0354>.
- Suresh, N., Ligor, T.A.A., Khan, S. and Khan, S.A. (2019) 'Comparative financial performance and financial soundness of banks in Bhutan: application of Dupont and Bankometer models', *International Journal of Psychosocial Rehabilitation*, Vol. 23, No. 1, pp.441–448, <https://doi.org/10.37200/ijpr/v23i1/pr190256>.
- Ta, H.P. and Har, K.Y. (2000) 'A study of bank selection decisions in Singapore using the analytical hierarchy process', *International Journal of Bank Marketing*, Vol. 18, No. 4, pp.170–180, <https://doi.org/doi/10.1108/02652320010349058/full/html>.
- Tehulu, T.A. and Wondmagegn, G.A. (2014) 'Factors influencing customers' bank selection decision in Ethiopia: the case of Bahir Dar City', *Research Journal of Finance and Accounting*, Vol. 5, No. 21, pp.2222–2847.
- Tošović-Stevanović, A., Ristanović, V., Čalović, D., Lalić, G., Žuža, M. and Cvijanović, G. (2020) 'Small farm business analysis using the AHP model for efficient assessment of distribution channels', *Sustainability*, Vol. 12, No. 24, p.10479, <https://doi.org/10.3390/su122410479>.
- Yamane, T. (1967) *Statistics An Introductory Analysis*, 2nd ed., in Amazon, Harper and Row [online] <https://www.amazon.com/Statistics-Introductory-Analysis-Taro-Yamane/dp/B0000CNPXC> (accessed 17 October 2021).

Appendix

Input matrix

Table 8 Factors matrix

	<i>Reputation</i>	<i>Price/cost</i>	<i>Services delivery</i>	<i>Recommendation</i>	<i>Convenience</i>
Reputation	1	1.1	0.6	1.8	0.5
Price/cost	0.9	1	0.6	2.4	0.8
Services delivery	1.8	1.6	1	3.2	1.3
Recommendation	0.6	0.4	0.3	1	0.5
Convenience	2.1	1.3	0.8	2.2	1

Source: Survey

Table 9 Bank comparison based on reputation

	<i>BOBL</i>	<i>BNBL</i>	<i>TBank</i>	<i>DPNBL</i>	<i>BDBL</i>
BOBL	1	2.3	3.3	3.3	2.5
BNBL	0.4	1	3.5	3	2.9
TBank	0.3	0.3	1	1.7	1.4
DPNBL	0.3	0.3	0.6	1	0.9
BDBL	0.4	0.4	0.7	1.2	1

Source: Survey

Table 10 Bank comparison based on recommendation

	<i>BOBL</i>	<i>BNBL</i>	<i>TBank</i>	<i>DPNBL</i>	<i>BDBL</i>
BOBL	1	2	2.7	2.9	2.5
BNBL	0.5	1	3	2.7	2.1
TBank	0.4	0.3	1	1.5	1
DPNBL	0.3	0.4	0.7	1	0.7
BDBL	0.4	0.5	1	1.5	1

Source: Survey**Table 11** Bank comparison based on convenience

	<i>BOBL</i>	<i>BNBL</i>	<i>TBank</i>	<i>DPNBL</i>	<i>BDBL</i>
BOBL	1	2.2	3.2	3.6	2.8
BNBL	0.5	1	3.2	3	2.1
TBank	0.3	0.3	1	1.8	1.1
DPNBL	0.3	0.3	0.6	1	0.6
BDBL	0.4	0.5	0.9	1.6	1

Source: Survey**Table 12** Bank comparison based on services delivery

	<i>BOBL</i>	<i>BNBL</i>	<i>TBank</i>	<i>DPNBL</i>	<i>BDBL</i>
BOBL	1	2.1	2.3	2.8	3
BNBL	0.5	1	3.1	3.1	2.3
TBank	0.4	0.3	1	2	1.4
DPNBL	0.4	0.3	0.5	1	0.8
BDBL	0.3	0.4	0.7	1.3	1

Source: Survey**Table 13** Bank comparison based on cost or price

	<i>BOBL</i>	<i>BNBL</i>	<i>TBank</i>	<i>DPNBL</i>	<i>BDBL</i>
BOBL	1	1.2	1.1	1.9	1.8
BNBL	0.9	1	2.1	2	2.2
TBank	0.9	0.5	1	1.9	1.3
DPNBL	0.5	0.5	0.5	1	0.8
BDBL	0.6	0.5	0.8	1.2	1

Source: Survey