

Layout of Service Organizations: The Case of A Bank

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***Abstract:** Limited research has been conducted to explore the layout structure of service organizations. This study explores the present layout of a bank— the largest service sector industry in the context of Bangladesh. Using observation techniques and a survey questionnaire, the findings of the study determines that the existing layout features of the bank is suitable for efficient operations and complies with existing theory in practice. The study has limitations in terms of generalizability and representativeness and has been recommended for future research using more sample organizations.*

1. Introduction

Layout features enable to determine the placement of departments, work groups within the departments, workstations, machines, and stock-holding points within a production facility (Chase et al 2006). The objective of a layout is to arrange these elements in a way that ensures a smooth work flow (in a factory) of a particular traffic pattern (in a service organization).

A number of studies (Bernal and Delgado 2006; Benjafaar et al 2000; Kusiak and Heragu 1987) have been conducted in determining the layout structure of manufacturing organizations, but there has been limited research in shaping the layout features necessary for service organizations. Therefore, this research addresses this problem by taking a service organization, like a bank, to find out the layout structure commonly available. In addition, the study also addresses whether the layout structure is feasible and acceptable by the users.

2. Review of the Literature

Krajewski et al (2009) state that the choice of layout depends largely on process structure the position of the processes on the customer-contact matrix for service providers and on the product-process matrix for manufacturing processes. They suggested four basic types of layout, viz. flexible-flow, where resources (employees and equipment) are organized by function rather than by service or product; line-flow layout, where workstations or

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departments are arranged in a linear path; hybrid layout, involves an arrangement where some portions of the facility have a flexible-flow layout and others have a line-flow layout; and fixed-position layout, where the arrangement includes the service or manufacturing site to be fixed in place along with their equipment and employees come to the site to do their work.

Magee (2009) states that facility layout and design requires smooth flow of work, material, and information through a system. It is an important component of a business's overall operations, both in terms of maximizing the effectiveness of the production process and meeting the needs of employees.

Konz (1985) comments that offices (service oriented entities) and manufacturing facilities are designed to reflect the disparate products that the two entities make. The manufacturing organization produces things that can be moved with conveyors and lift trucks, uses utilities including gas, water, compressed air, waste disposal, and large amounts of power as well as telephones and computer networks. On the other hand, service organizations like business offices produce information disseminated in physical (reports, memos, and other documents), electronic (computer files), or oral (telephone, face-to-face encounters) forms. As per Konz (1985), a layout criterion for manufacturing organizations is minimization of transportation cost, and for service organizations, the layout criterion is the minimization of communication cost and maximization of employee productivity.

In a research to- determine the next generation factory layouts, Benjafaar et al (2000) affirm that there is an emerging consensus that existing layout configurations of factories do not meet the needs of the multi-product enterprise and that there is a need for more flexible, modular, and more easily reconfigurable factory layouts. Rojas and Torres (n. d.), similarly, describe that the facility layout problem is based on the optimal allocation of all the departments that are involved in a productive process, looking for the economy of resources such as space and time.

Vilarinho and Guimaraes (2003) observe that the design of facility layouts involves a decision process which has to be decomposed into several sub-problems, namely: the selection of the most adequate manufacturing - processes, the planning of equipment and labour requirements, the allocation of manufacturing operations to machines, the grouping of machines into sections (cells or departments), the selection of handling equipment, the specification of the work-in-process parking areas and the definition of the location of machines and sections on the manufacturing plant.

From the review of the existing literature, it appears that most of the research relating to layout has been focused in the areas of manufacturing organizations. The study of Konz

(1985) looks into the issue of layout features essential for service firms like office work but does not provide elaborate explanation of the necessary layout structure. Therefore, this study, as an initial study into layout structure of service organizations, looks into the existing layout features available in service organizations. Not only that, this study also determines whether the feature is suitable for day-to-day operations and whether the structure recommended in existing theory is actually practiced or not.

2.1 Scope of this Study

Service organizations are those which produce intangible, perishable outputs, where the output cannot be inventoried, requires high customer contact, is labour intensive, and where quality cannot be measured (Krajewski et. al. 2010). In the context of Bangladesh, the organizations which have the highest level of customer contact with large number of employees are the banks. Banks also have the highest level of investment¹, and require great amount of resource flexibility. Therefore, for this study, the scope of this research will be the banking organizations of Bangladesh.

Proximity and privacy are two important ingredients in designing a layout for a bank (Krajewski et. al. 2010). Proximity involves providing easy access for its customers and employees enabling communication and mutual trust and respect. Researchers recommend that proximity can be achieved by opening up the work place by replacing fixed walls with low-rise partitions (Stevenson 2005; Krajewski et. al. 2010). However, financial institutions recommend for the need for privacy (Krajewski et. al. 2010). Outside disruptions and crowding can hamper performance of workers and disrupt the services provided to clients. Hence, the privacy issue can be achieved by raising walls and doors. However, both privacy and proximity are contradictory requirements of a bank layout. There requires a balance between the two features.

Most front office based service process is structured, which involves high customer contact (Krajewski et. al. 2010). In banks, the layout structure is based on the optimal allocation of all the departments that are involved in an operational process, aimed in achieving the cost-cutting measure for time and space. In such a layout context, a department or facility is a physical entity that facilitates the development of any productive process. The minimum parameters required to solve the problem are: number of departments, size of the office, size of the departments to be located, flow matrix between the departments of the branch and the unit transportation cost matrix (Bernal and Delgado 2006).

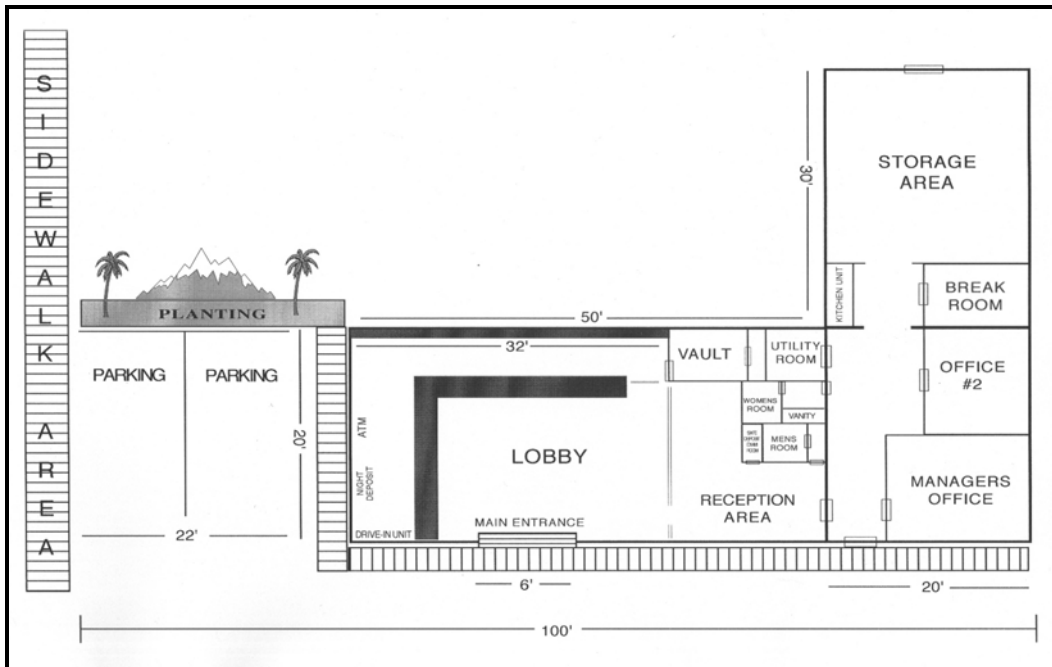
¹ Please see Bangladesh Bank report of May 2009 shows a deposit of Tk. 2686.67 billion [please see <http://www.bangladeshbank.org/pub/weekly/finposition/openpdf.php?urlpdf=20090514finpos.pdf> (accessed 22 Mar 2010)].

Banks, like every financial institution, require providing face to face service. Although there are some constrains to ensure better service facilities in face to face services, some standards have to be followed to ensure a good layout. These included having an easily understood service flow pattern, adequate waiting facilities, easy communication with customers, easily maintained customer surveillance, clear exit and entry points with adequate checkout capabilities, departments and processes arranged so that there is minimum walking and material movement, lack of clutter, and high sales volume per square foot of facility (Chase et al 2006).

2.2 Existing Banking Layout Features of Banks

As stated earlier that very limited amount of research has been conducted to determine the layout features of service organizations, therefore, hardly no layout feature has been obtainable from existing published material. However, on searching the online databases of real estate corporations, the researchers revealed some layout structures for banks. Of these, one layout plan has been provided as follows, which shows the typical layout structure in US banks:

Fig. 1: Typical Layout Design of a US bank



Source: <http://www.pecorabrothers.net/images/layout2.jpg> (accessed 22 March 2010)

3. Methodology of the Study

As stated earlier that this study looks into the existing layout existent in service organizations. Previous research have not looked into several issues of layout features but most research have not provided illustrations of the necessary layout structure needed for service organizations. Therefore, the aim of this research is to find out what feature is suitable for day-to-day operations. Additionally, it also aims to see whether the layout structure revealed conforms with existing theory contributing to knowledge creation and introduction of new practices. Hence, this objective of this research indicates that it is an exploratory research where the researcher has limited knowledge of the subject area (Lekvall and Wahlbin 1993). Hence, the very nature of this research indicates to exercise such an approach which is commonly used during the initial phase of any research.

Being an exploratory study, both an observation technique and a questionnaire were used to collect data. An observation can be of two types: participant observation, where the researcher attempts to fully participate in the lives and activities of the subjects and structured observation, which involves systematic, high level structure in the data collection process (Saunders 2007). Here, a participant observation technique is adopted and one of the researchers has had involved herself in the Prime Bank for a period of 1 month. The participant observation technique has been suitable as it provides the researcher with an understanding of the emotions of the participants and enables virtually to collect all the data that are useful.

3.1 Development of the Survey Instrument

Since this is the first study of its kind, the questionnaire is developed from scratch. A focus groups discussion consisting of around 19 students from the University of Dhaka was conducted to obtain views on existing layout structure of banks in which the participants did their banking. Focus group discussions require a size of 10-12 participants and the discussion needs to be monitored so that participants stick to the topic (Krueger and Cassey 2009). A large size was used in this focus group with the aim that divergence views from the participants will be obtained because some of the participants have had experience in banking both in the rural areas as well as urban areas.

Based on the perceptions, a questionnaire was developed (as shown in appendix A). The questionnaire consisted of some statements where respondents are required to respond on a 5 point Likert scale, where 1 reflected 'strongly disagree', 2 denotes 'disagree', 3 refers to 'neutral', 4 is 'agree', and 5 refers to 'strongly agree'. The questionnaire was piloted amongst 50 students of the same university and the Cronbach Alpha scores showed a

value above 0.50 (which was acceptable as per Pallant 2007), and hence showed internal consistency.

3.2 Population and Sample of the Study

In Bangladesh, there are about 105 banks² including foreign, private, and state run with thousands of branches spread throughout the 64 districts of the country. The branches require adequate planning for layout structure and therefore, constitute to the population of this study. Since, the number of branches for the banks in Bangladesh is numerously large and there is also the limitation in terms of money and time, this study, therefore, adopts convenience approach for data collection where the Elephant Road branch of Prime Bank Ltd. is chosen for the study. For filling in the questionnaire, the employees were chosen; customers were not asked to take part in the survey because they may not have been involved in the designing process of the layout of the branch and may have limited knowledge about its existing structure.

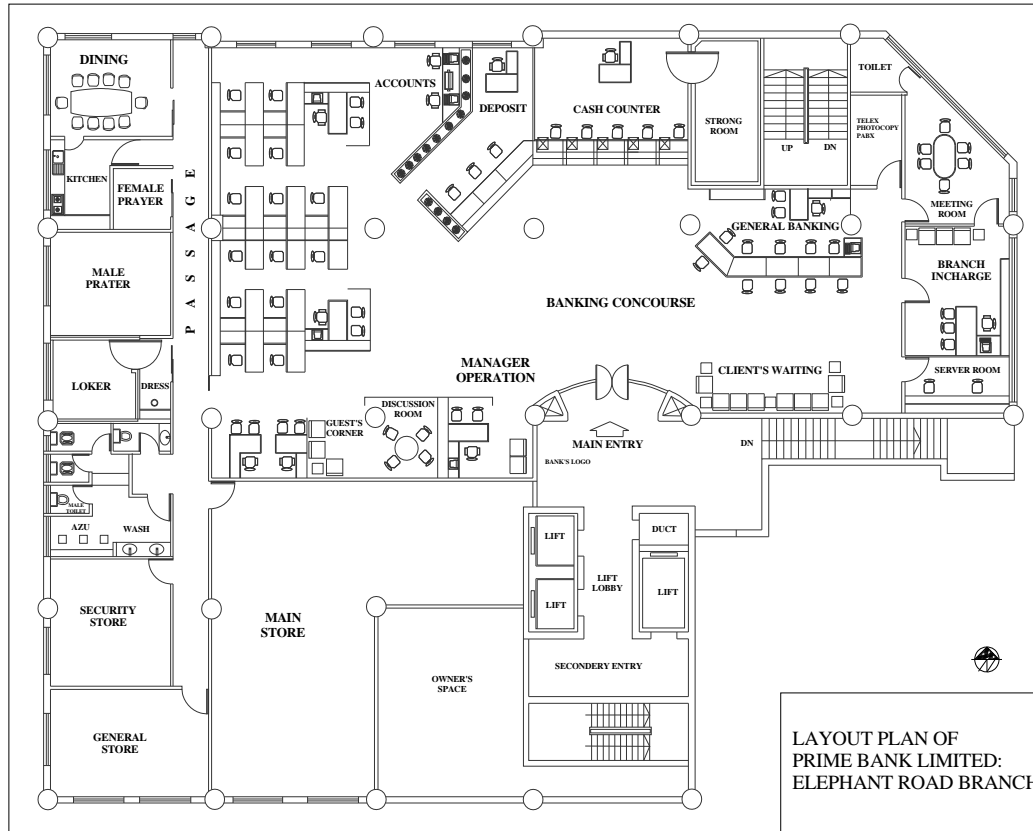
4. Data Collection and Analysis

The observation of the researchers revealed that the Elephant Road branch of Prime Bank Ltd. is located on level 2 of a building located on the main stream of the Elephant Road. It has its entrance and exit facilities through the elevator system and the staircase. In the ground floor of the building, another bank is located indicating the common clustering of financial institutions in specific locations of Dhaka city. The location of the Elephant Road branch of Prime Bank Ltd. adjacent to the other private bank puts it into a competitive position. Not only that, being on level 2 of the building puts the branch in a disadvantageous situation as the customers would prefer moving into the ground floor location because of ease as well as to avoid the waiting times in the lifts and difficulty in using of stairs.

The layout structure of the bank is shown in Figure 2. The main entrance point is located very close to the landing point of lifts and staircases and thereby also creates the chance for cluttering of individuals. However, there is an open space in the landing point but not close to the main entrance of the branch.

For day-to-day operations, the cash counter is located in the opposite of the entrance so that customers can come instantly to avail the services of the bank. The interior of the bank provides state-of-art features with internal temperature control and adequate furnishers and fixtures to create an impression of a hospitable atmosphere.

² Please see <http://www.bangladesh-bank.org/> and http://en.wikipedia.org/wiki/List_of_banks_in_Bangladesh

Figure 2: Existing layout structure of Prime Bank, Elephant Road Branch

On the right side of the main entry (as shown in Figure 2) is a small seating area for customers. This is meant for discussing private and delicate issues with customers regarding their banking services. The branch-in-charge's (manager) room is located nearby on the right (as shown in Figure 2) so that he/she can understand which customer is waiting and requires immediate assistance. The other reason for having the branch-in-charge's (manager) room in such a corner is that he/she has clear visibility of all the employees, customers, and activities that are taking place in the bank. Adjacent to the branch-in-charge's room, there is a meeting room to conduct meetings.

Additionally, for the employees the bank has all the necessary facilities like dining, kitchen, prayer room for male and female employees, locker rooms, toilet facilities washroom for wudu, security store, general store etc at the left side of the bank with a 4 feet wide access passage. The rooms of all sections in-charge are placed in the same location of all respective section for ensuring maximum interaction between the section heads and the employees of respective sections. This also ensures maximum service quality by reducing time to communicate among employees.

The survey questionnaire was conducted amongst all the 34 employees of the branch. Findings revealed that about 57.65 per cent of the employees of this branch agreed that the existing layout facility is suitable for effective performance of the activities of the bank (please see Figure 3). 33.3 per cent of the respondents are in much favour of sticking to the existing facility. On the other hand, about 66.6 per cent of the employees of this branch stated that the existing layout arrangement of this bank is comfortable for operational purpose (as shown in figure 4). They felt better to work in existing layout arrangement in making delivery of the services to their clients.

Figure 3: Pie Chart showing Responses of Participants to Q1 of the Questionnaire

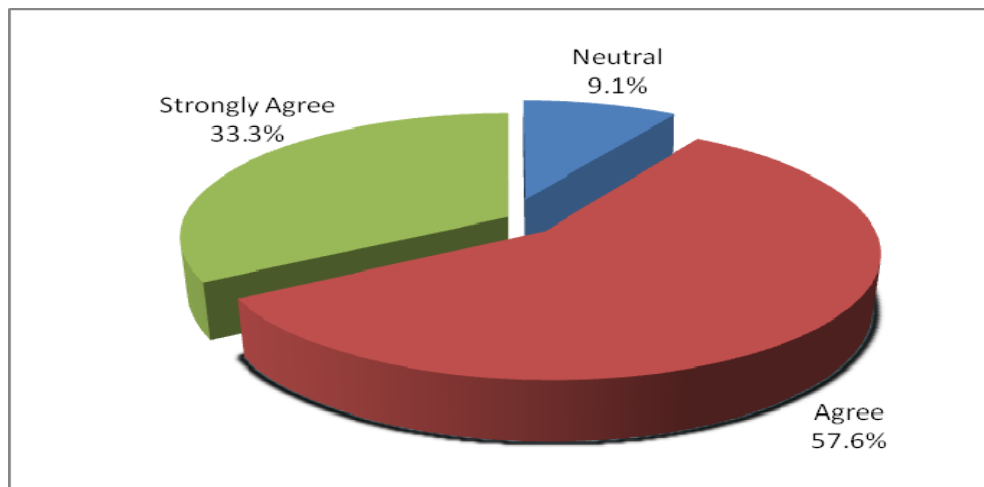
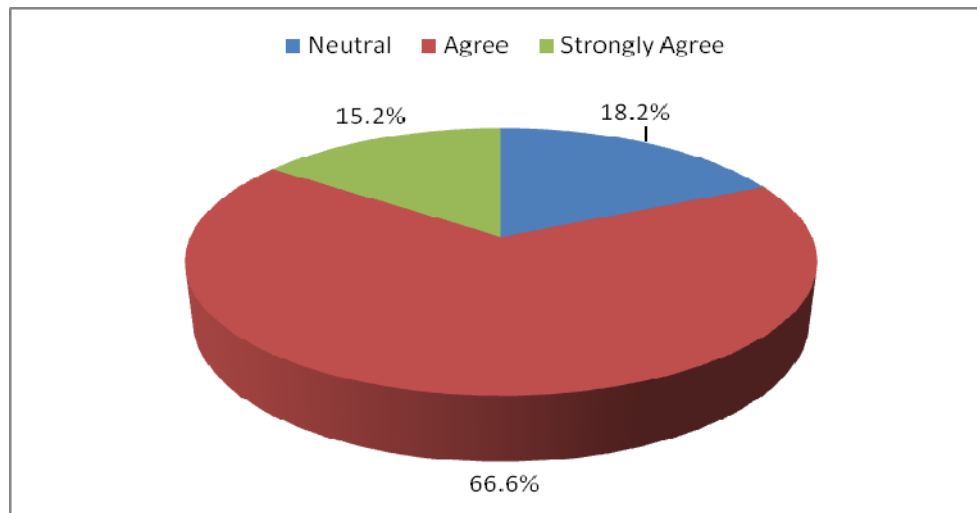
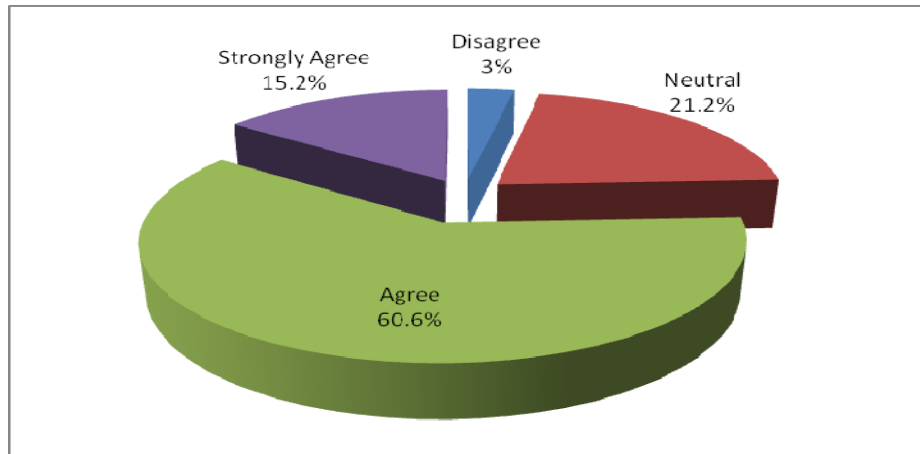


Figure 4: Pie Chart showing Responses of Participants to Q2 of the Questionnaire



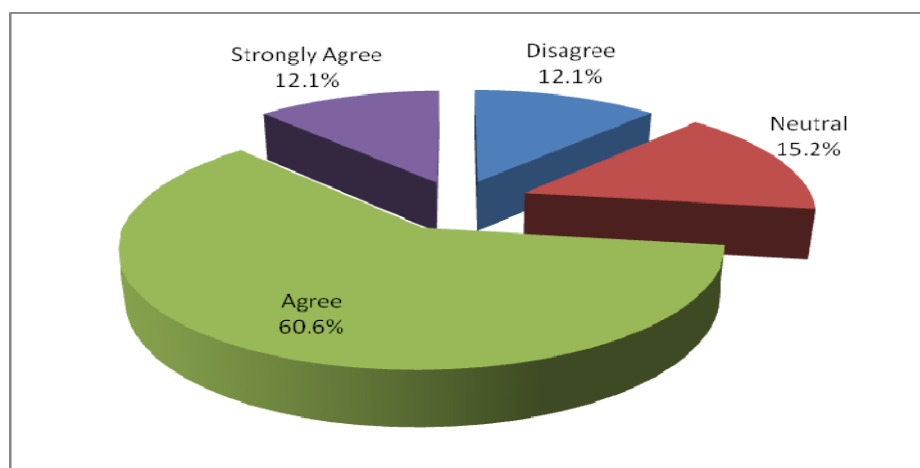
In terms of customer checkout facility including the exit and entry points, 3 per cent of the employees felt that the facilities are not congenial for the customers (as shown in figure 5). A good number amounting to 21.2 per cent has remained neutral in this respect to this opinion. However, 76 per cent of the employees of this bank are in favour of the adequacy of checkout capabilities of this branch in terms of exit and entry points.

Figure 5: Pie Chart showing Responses of Participants to Q3 of the Questionnaire



About 57.6 per cent of the employees (as shown in Figure 6) agree that the departments and various processes are arranged so that customers can see whichever is convenient for them. There may be other features within the bank which are kept away from visibility of the customers. Interestingly, 24.2 per cent of the employees do not agree to the capability of such feature being present based on the existing layout.

Figure 6: Pie Chart showing Responses of Participants to Q4 of the Questionnaire



Credit and other non-selling departments require customers to wait for availing the banking services. About 70 per cent of the participants reported that the customer waiting facilities are adequate and waiting time is suitable to avail banking service (as shown in Figure 7). Also about 56 per cent of the respondents (as shown in figure 8) that the service and waiting area of this branch is well balanced, which means that the facilities are suitable with varying demand situations

Figure 7: Pie Chart showing Responses of Participants to Q5 of the Questionnaire

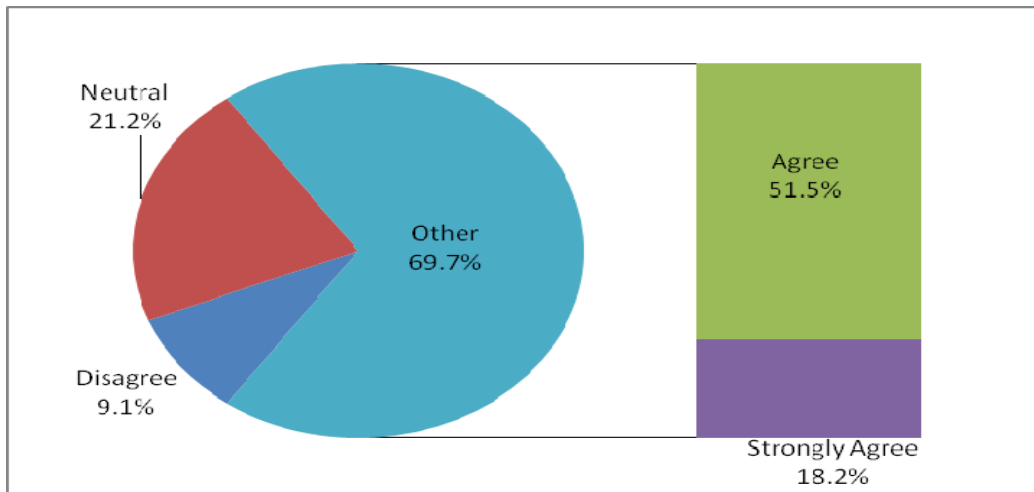
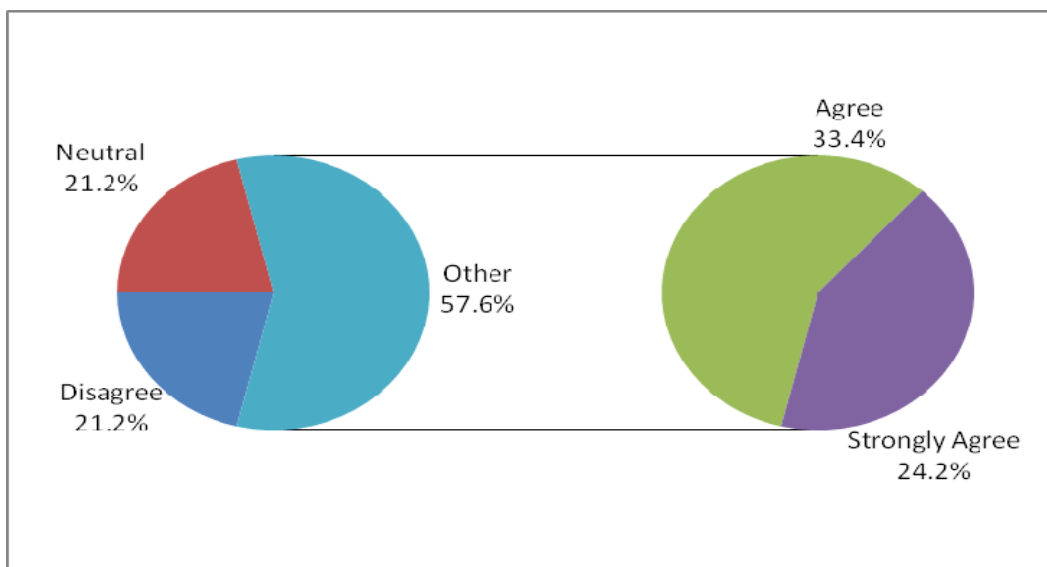
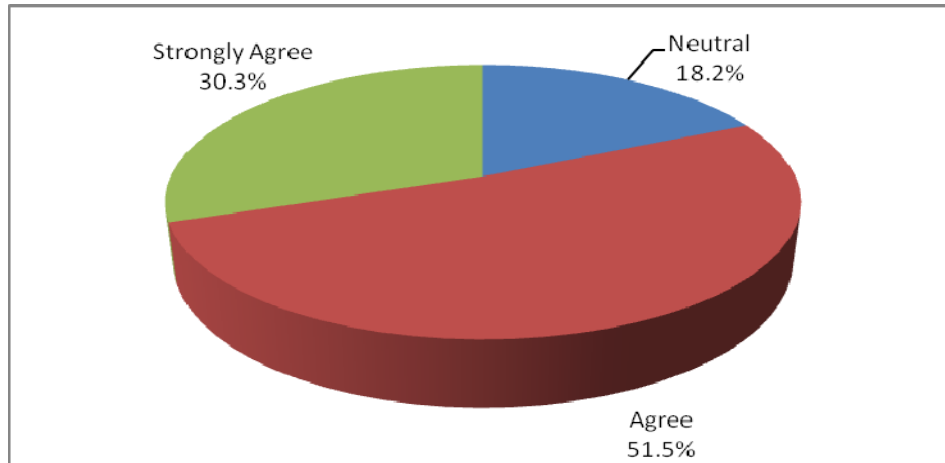


Figure 8: Pie Chart showing Responses of Participants to Q6 of the Questionnaire



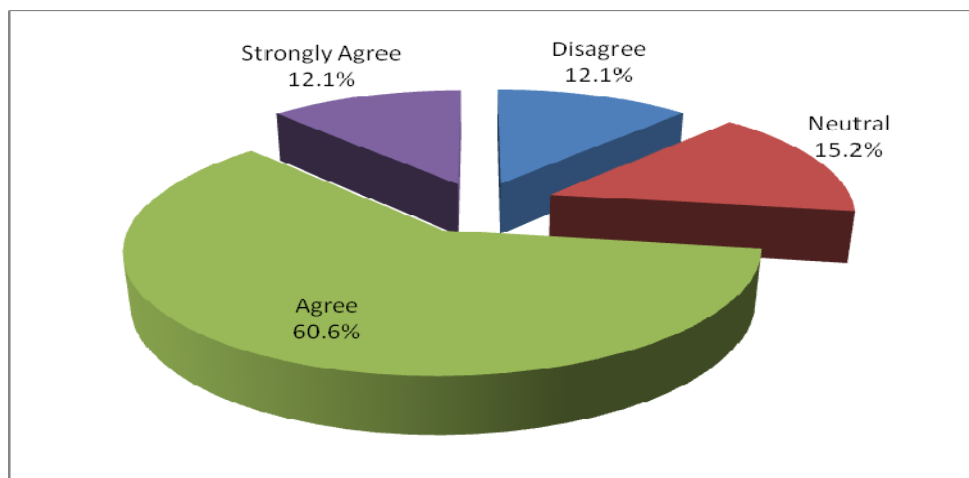
To meet the highest customer's satisfaction as well as to ensure better services to clients, it is important to facilitate easy communication over the counter. In this branch, the majority of the employees (amounting to 81.6 per cent) deemed that the customers call communicate without difficulty. The results of the respondents are shown in a pie chart in Figure 9.

Figure 9: Pie Chart showing Responses of Participants to Q7 of the Questionnaire



Finally, Figure 10 displays that the 60.6 per cent of the respondents agreed that the existing layout of bank limits cluttering of customers and employees enabling ease flow of customers and employees. This leads to ease in operations and quicker service delivery.

Figure 10: Pie Chart showing Responses of Participants to Q8 of the Questionnaire



5. Discussions and Interpretations

The findings of this study based on observation techniques and a questionnaire enabled the researchers to acquire initial insights into the layout features of a service organization that is, the bank. One of the requirements of all organizational layouts is the need for effective performance and ease of operational activities. Since, most of such activities in a bank are in the hands of the employees of the organization, the responses of the participants indicate that the existing layout is suitable to achieve these goals.

Spatiality is a feature which involves a circulation planning where the path for the customers expose them to as much of the merchandise as possible while placing any needed services along this path in the sequence³. Participants in the study agreeing about the operational ease in the layout and the ability to move freely within the entry and exit points are an indication that the bank is capable of providing such spatial layout. Additionally, the arrangement of the departments of the processes as well as adequate space in waiting areas is also indication of the ability to ensure spatiality in the layout structure.

Additionally, for ease of operations, the layout features also indicate that there are no barriers in communicating between employees and customers (Krajewski et. al. 2010). This ensures that customer needs are met prudently and there is hardly any scope for customer dissatisfaction.

Researchers (Magee 2009; Stevenson 2005) have recommended that the layout of service organizations must take into consideration the presence of customers and thereby must take the opportunity to enhance sales and achieve favourable customer attitude through carefully designed layouts. The employees have the reports of annual performance of the bank in terms of annual sales and increased customer satisfaction, and therefore can conclude that the existing structure of the bank is achieving this specific goal. Moreover, the features and the layout of the different service areas are promoting free flow of customers as well as employees.

As a means to offer openness and free communication (as recommended by Konz 1985), the barriers dividing employees have been reduced and therefore there is easy communication amongst the employees. Additionally, customers can also interact with the staff of the bank, leading to more customer satisfaction and clear communication.

Previous studies (Stevenson 2005; Konz 1985) stated that office layout is shifting from the use of paperwork to electronic communications. This bank has a good array of

³ <http://www.ateneonline.it/chase2e/studenti/tn/6184-7-tnO5.pdf> [accessed on 8th October, 2009]

computers, machine operated money counting machines, an ATM access point, and security devices. Hence, the bank is complying with such trend of automation of processes to ensure efficiency in operations.

In conclusion, the study provides an overview of the layout structure of service organizations like banks. However, the study has certain limitations which need to be addressed and are discussed in the later section.

6. Conclusions: Limitations and Directions for Future Research

This paper provides an understanding of how theory conforms to practice in case of layout design of service organization. For practitioners, the study provides insights on the necessary layout structure that will be suitable in case of service organizations, especially banks.

One of the major limitations of this study is the issue of representativeness and generalization of the results. Since one branch of a bank was surveyed, it may not represent the whole population. The results are also not generalizable. In future, researchers may consider multiple banks with different branches.

The respondents to the survey were employees and it was not possible to survey the customers. Employees may have positively presented the layout features and therefore the actual picture of the suitability of the layout may not be obtainable. In future, customers need to be included into the survey and therefore, opinion about the layout features from customers can warrant whether the layout is suitable or not.

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**APPENDIX A: QUESTIONNAIRE USED FOR THE SURVEY OF
RESPONDENTS AT THE PRIME BANK LTD., ELEPHANT ROAD BRANCH**

Name of the Respondent:

Designation:

Age:

Sex: i) Male ii) Female

	Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
Q.1	An effective layout facility can enhance the performance of the bank.					
Q.2	The existing layout arrangement of this bank is comfortable for operational purpose.					
Q.3	Existing exit and entry points are adequate with checkout capabilities.					
Q.4	Department and processes are arranged so that customers see only what you want them to see.					
Q.5	Customers waiting facilities are adequate and waiting time is suitable for providing better services.					
Q.6	There is a balance between waiting areas and service areas allowing to meet changing demand situations.					
Q.7	Customers can communicate over the counter easily.					
Q.8	The existing layout structure of this branch is maintained lack of cluttering of customers and employees					