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## **Executive Summary**

Channel A is a start-up company whose mission is to create the premier Internet brand for the delivery of Asian-related information, products, and services to Asia watchers in the U.S. We first analyze Channel A's current position in the industry using the Porter's Five Forces. This is followed by a Pilot Decision Analysis which illustrates some of the meaningful courses of action in marketing strategy. These preliminary analysis indicate that Channel A needs to create a superior brand identity to remain competitive. We developed an optimization program to address the immediate problem of effectively allocating limited budget for various advertising media. For long term planning strategy, we use conjoint analysis and diffusion model to assess the customer's preferences and estimate its customer's growth. Evaluation of Channel A's situation indicates that they should adopt a "Superior Brand ID Strategy".

### Superior Brand ID Strategy

- Increase word of mouth effect by providing better services
- Focus marketing effort on Arts & Entertainment, Business and Food categories
- Offer low price range products
- Update the web page frequently
- Maintain short delivery lead time
- Dynamically adjust Channel A's marketing strategy according to its customers growth curve from diffusion model

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## Corporate Background

Channel A (<http://www.channela.com>) is a start-up company whose mission is to create the premier Internet brand for the delivery of Asian-related information, products, and services to western consumers. It is the first US-based company to target Asia-watchers who are interested in finding content on Asia and Asian America and in purchasing hard-to-find, high quality Asian products and services. It provides a much-needed service in bridging Asian vendors and Asia-watchers which includes collateral, packaging, advertising, public relations, events, and online marketing. Using the Internet, Channel A moves the Asian marketplace beyond the traditional channels which brings mutual benefits to both vendors and consumers. On one hand, it gives Asian vendors a direct and cost-efficient distribution channel to target the Western markets; on the other hand, it draws consumers' interest in Asian products and help them to find goods that meet their needs. A sample of channel A web page is given in Appendix I.

Channel A's business is summarized in its three-pronged approach to bringing Asian products and information to the West as follows (see Figure 1):

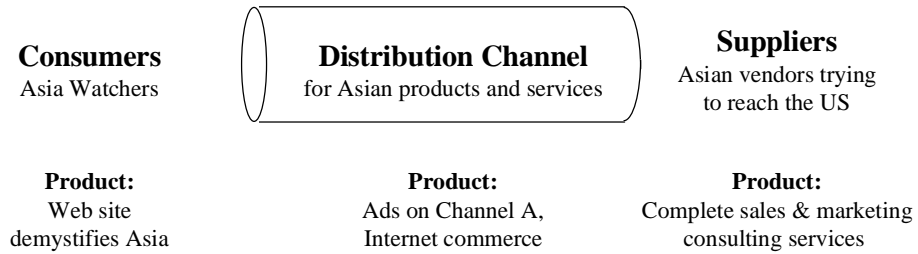
*1. Web Content:* Channel A's award-winning Web site allows westerners to experience Asia in an entertaining and educational way. For advertisers, the site captures a targeted audience of affluent Asia-watchers.

*2. Internet Commerce:* Channel A's Web site combines entertaining and educational content on Asia with Internet commerce to create the first and foremost global sales channel for Asian information, products, and services.

*3. Client Services:* Channel A helps Asian vendors reach the US market with a full range of sales strategy and marketing communications services.

The site currently offers information in five areas: Arts and Entertainment, Business, Community, Food, and Health and Wellness. In the future, Channel A may extend their services to other key areas.

Figure 1



## **Problem Description**

### ***1. Preliminary Discussion***

An initial discussion with the CEO and marketing manager of Channel A has revealed that one of the most challenging tasks at present is to sustain its competitive advantage as an early mover of the Asia-watchers Internet market. However, with limited resources on advertising or promotional activities, Channel A now faces a problem on how to effectively use their resources to achieve its mission.

### ***2. Preliminary Analysis***

We first analyze Channel A's current position in the industry using the Porter's Five Forces. This is followed by a Pilot Decision Analysis which illustrates some of the meaningful courses of action in marketing strategy. The details are given as follow:

#### ***2.1. Porter's Five Forces Analysis***

All five competitive forces exist in every industry, but the strength of each of the forces varies within each industry. In our analysis, only those determinants that are relevant are highlighted and discussed (See Appendix II). We notice the following key facts:

- Channel A's current rivals have different target customers (they focus more on the niche markets). In other words, Channel A has no direct rivals now.
- The entry barrier for this industry is weak, i.e., new entrants can join in easily.
- Channel A's future growth relies on its brand identity which ensures loyalty of customers, attractiveness to potential customers, and its competitiveness in the industry.

The above implies that Channel A has to put more emphasis on creating a superior brand identity which helps them to build a stronger entry barrier, “grab” and “hold” more customers, and sustain its competitive advantage over its rivals.

Channel A is currently building its brand identity by imposing trademark and copyright on all its productions. They want to build a strong brand identity that would:

- make the people think about Channel A whenever they want to buy some Asian products, and
- make the Asian vendors think about Channel A whenever they want to introduce a new product to the U.S. market.

To build such a superior brand identity, Channel A has to fund a lot of advertising projects and other promotional activities (including building good relationships with vendors and customers). The effectiveness of these activities can be reflected by the growth in the number of customers. However, due to limited financial and human resources, Channel A has to choose the optimal mix of promotion activities based on its budget and the corresponding activities’ prices and effectiveness.

## ***2.2. Pilot Decision Analysis***

Having recognized the importance of brand identity, or in other words, marketing strategy, we next perform a high-level pilot decision analysis to frame the problem and to isolate both the key decisions that can be made, and the information that needs to be gathered.

The several issues that Channel A concerns are its long term and short term profitability, the reputation of the company, the popularity of its web site, and its position in the market.

### ***2.2.1. Decision hierarchy:***

A decision hierarchy is a useful tool for categorizing information, and for structuring the problem in order to understand the main focus of the project. It shows which decisions fall into which levels of decision hierarchy: policy, strategy or tactics, and which is the most important area in the context of decision analysis.

*Policy:* As mentioned earlier, Channel A's mission is to create the premier Internet brand for the delivery of Asian-related information, product, and services to western consumers. It encourages Asia-watchers to experience Asia in an entertaining and educational way. It serves as a channel between the Asian vendors and the Asia-watchers in the US.

*Strategy:* With the above policies in mind, the critical issue in marketing strategy is to ensure customer's satisfaction. As a result, Channel A needs to constantly monitor the changing demand and preference of its customers and make the necessary improvement in order to remain competitive.

*Tactics:* Some tactical issues arise after the decision of adopting this marketing strategy. It is needed to decide the content of the web pages and the range of products and services to be provided according to customer demand and preferences; it is also necessary to define the input and output mix of the marketing budget and labor resources; it is also important to study the change in number of web

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site visitors to ensure that the current technology is able to support the increasing capacity. Regardless of the marketing strategy, the pricing of Channel A's products and the vendor relationships are all contributing to the success of Channel A.



### ***2.2.2. Uncertainties:***

We have identified the following uncertainties:

- Market potential for the Asia products, services, and information.
- Coefficients of external and internal influences.
- Effectiveness of advertising.
- Number of vendors and suppliers.

All these are important as they will affect the accuracy of our analysis.

Due to the difficulty in finding the coefficient of external influences ( $p$ ) and the coefficient of internal influences ( $q$ ), we assumed that the rate growth of the Internet will be the same

as the rate of growth of Channel A. Also, the total market potentials of Channel A ( $m$ ) is calculated using the assumption that Asian-American constitutes to the main source of Asia-Watcher on the Internet. (see Diffusion Model for details).

We also propose to measure the effectiveness of each advertising strategy by measuring the increase in sales of the products and the increase in hit rate of Channel A's web site after launching different advertising schemes. However, it is difficult to relate how different advertising strategies affect their resulting increase in sales of the products or the increase in the hit rate of Channel A's home page. Channel A is currently designing a survey form to collect information and statistics about its customers. Once it is launched, the effectiveness of each advertising medium can then be estimated. In our analysis, we used the total average paid circulation of each medium as an approximation (see Optimization for details).

**Aim**

After the preliminary analysis, we have identified brand identity as the key issue to sustain competitiveness in the industry. This can be achieved through advertising and promotional activities while maintaining good relationships with the vendors and customers. The aim of our project is thus to provide strategic insights on the effective allocation of Channel A's limited budgets in advertising and other promotional activities which are crucial to the company's future development.

## **Methodology**

We adopted the following methodologies for our analysis:

1. **Conjoint Analysis.** This assesses the customer's preference and is used for long-term planning. A software was developed and given to Channel A for future analysis.
2. **Diffusion Model.** This model can be applied to estimate the number of new customers of Channel A by a certain time after a new service is launched. It is also used for long-term planning purposes.
3. **Optimization.** A program was developed to address the immediate problem of effectively allocate limited budget for various advertising media.

The details of these methodologies are given below.

### ***1. Conjoint Analysis***

We use Conjoint Analysis to monitor the customers' preferences, demands and "tastes". As stated in the earlier section, we have identified that Channel A needs to concentrate on building up its "brand name". This is to create a high entry barrier and at the same time sustain its competitive advantage. Thus, ensuring customers' satisfaction is very vital. Conjoint Analysis basically helps marketing researchers understand how individuals value features, or "attributes", of products or services by determining their trade-offs between different "levels" of those features. In our project, we determine how customers trade off between viewing the different contents on Channel A's web page, the price ranges of the various products, the delivery lead times and the update rates of the web contents. In other words, we measure the collective preferences and demands of the Asia Watchers, and to identify their areas of interest. Thus, the objective of our conjoint study is to

determine the feasible mix of services offered that has the highest level of customers' preference.

We develop a program (PC-based) using the Sawtooth Software ACA System to collect the data for the analysis. The ACA System is intended for generalized conjoint studies where interactions among attributes are non-existent (or so insignificant as to be of no concern). The following attributes and levels are used (a sample of the screen display is given in Appendix III):

Attributes	Levels
1. Area of Interest	1. Arts & Entertainment 2. Business 3. Community 4. Food 5. Health & Wellness
2. Price Range	1. Less than \$100 2. \$100 - \$300 3. \$300 - \$500 4. \$500 - \$1,000 5. More than \$1,000
3. Delivery Lead Time	1. 2 - 3 days 2. 3 days - 1 week 3. 1 - 2 weeks 4. 2 - 4 weeks 5. More than 4 weeks
4. Web Page Update Rate	1. Less than 1 week 2. 1 - 2 weeks 3. 2 - 4 weeks 4. More than 4 weeks

The program was given to 20 current and potential customers of various background (Asians and non-Asians). The following results are obtained:

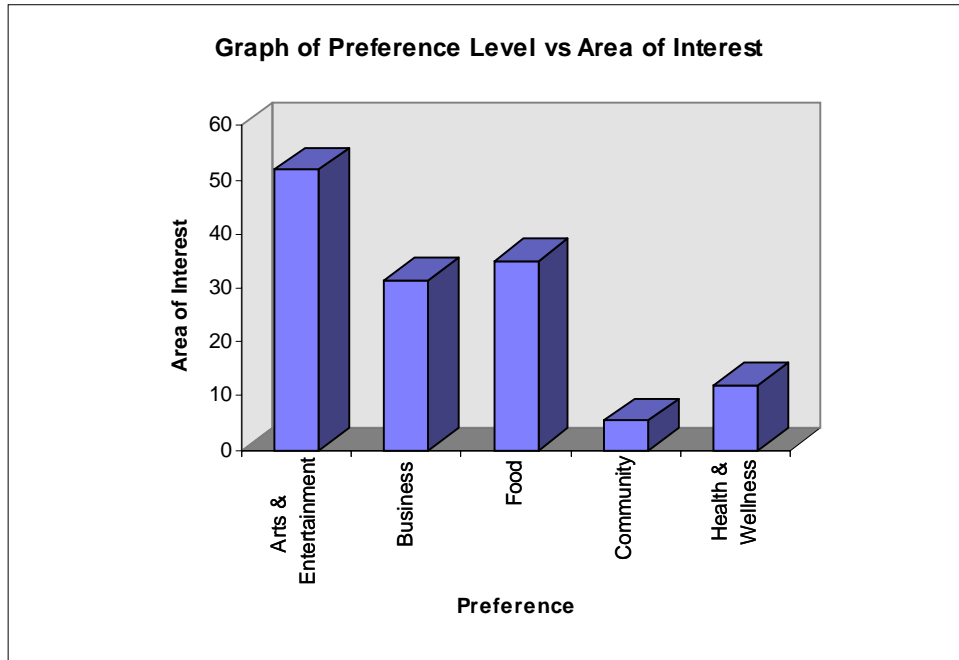


Figure 2 Preference Level vs Area of Interest

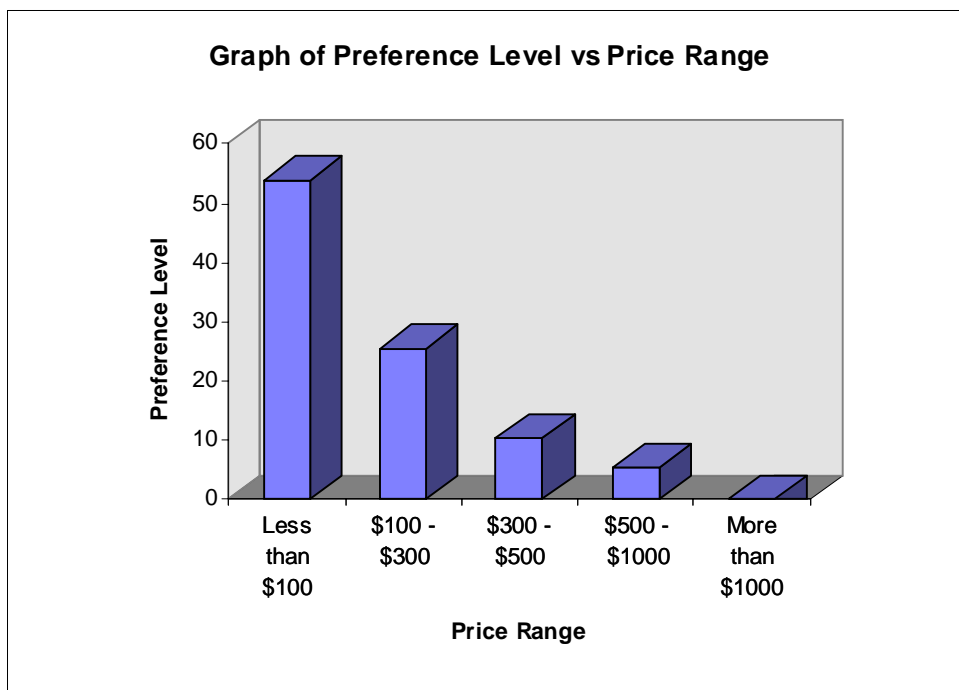
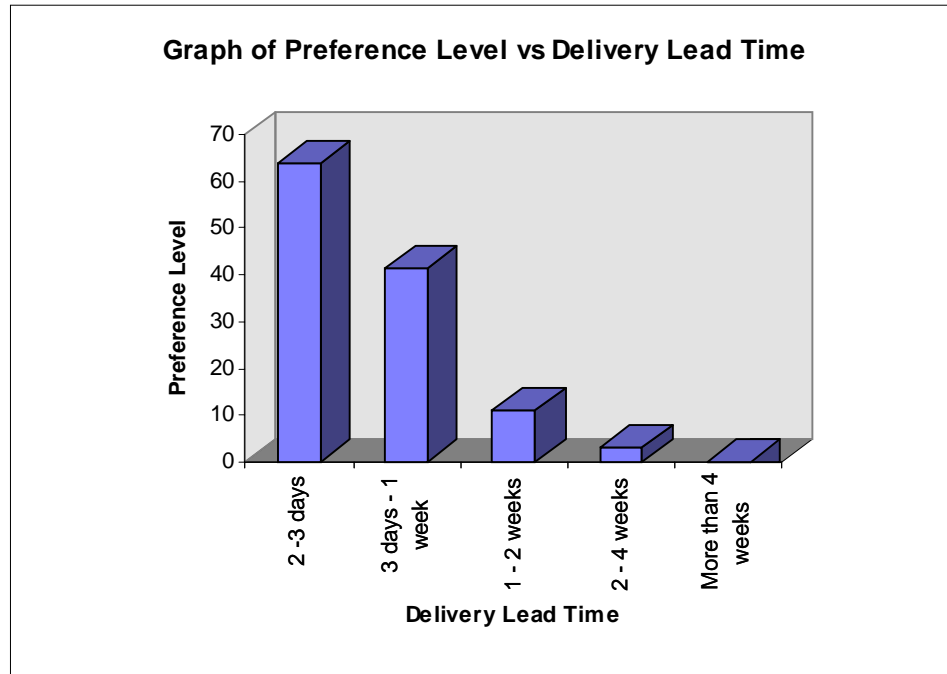
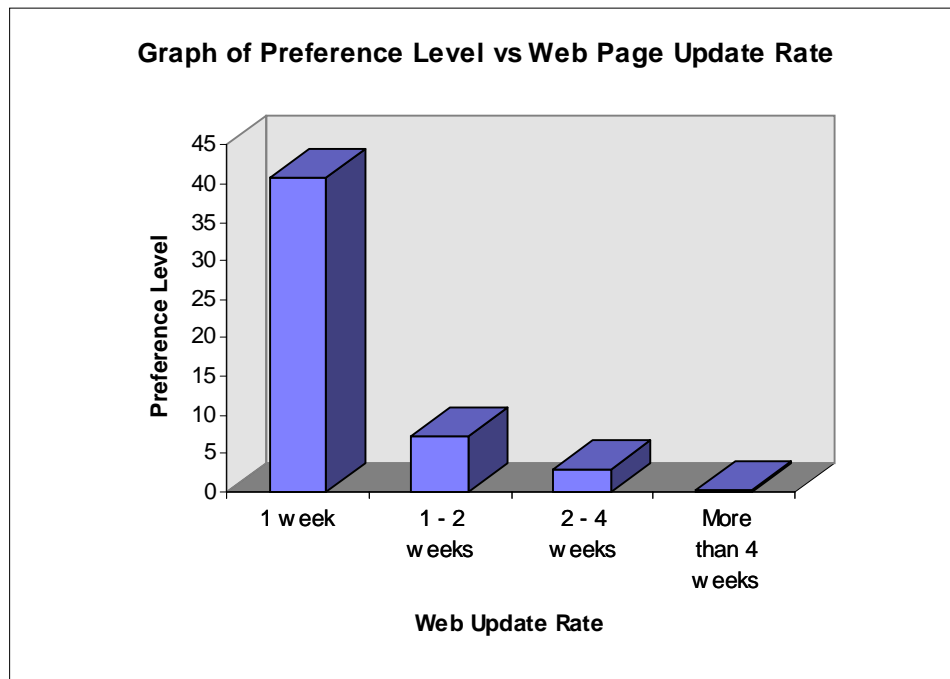


Figure 3 Preference Level vs Price Range



**Figure 4 Preference Level vs Delivery Lead Time**



**Figure 5 Preference Level vs Web Page Update Rate**

Our study has indicated a strong interest, among the customers, in Arts & Entertainment. This is followed by Business and Food. There is little interest in Health & Wellness and Community. We recommend that Channel A should focus its marketing effort in Arts & Entertainment, Business and Food to meet the general preference of the customers, and consequently building its “brand name” and creating its awareness. Once a large pool of customers is attracted, it can then consider to shift its strategy to generate more interests in Health & Wellness and Community.

The customers also prefer products in the lower price ranges (\$100 - \$300) and will like them to be delivered within a week. Channel A should thus advertise products at this price ranges and deliver them to the customers within a week. In addition, a weekly update rate of the web contents is most preferred.

We can also make use of the results to estimate the choice behavior of the customers. We can predict the average customer’s choice between two or more mix of services by summing up the preference level for each mix. For example, consider the following mix services:

Mix of Services 1	Preference
Business Area	31.5
\$500 - \$1000 Price Range	5.12
1 - 2 weeks Delivery Lead Time	11
2 - 4 weeks Web Page Update Rate	2.83
Total	50.54

Mix of Services 2	Preference
Community Area	5.33
\$100 - \$300 Price Range	25.33
3 days - 1 week Delivery Lead Time	41.5
1 - 2 weeks Web Page Update Rate	7.17
Total	79.33

Hence, mix of services 2 (with total preference 79.33) is preferred to mix of services 1 (with total preference = 50.54). This means that although Business is more popular, customers will switch to Community if it offered better services (in terms of delivery time and web page update rate) at lower product cost.

We can determine if the customers can switch to mix of services 1 if we lower its delivery lead time to 2 - 3 days. The following results are obtained:

Mix of Services 1	Preference
Business Area	31.5
\$500 - \$1000 Price Range	5.12
2 - 3 days Delivery Lead Time	63.67
2 - 4 weeks Web Page Update Rate	2.83
Total	103.12

Mix of Services 2	Preference
Community Area	5.33
\$100 - \$300 Price Range	25.33
3 days - 1 week Delivery Lead Time	41.5
1 - 2 weeks Web Page Update Rate	7.17
Total	79.33

Thus the customers is likely to switch to mix of services 1.

It should be noted that our analysis was based on a sample of 20 customers. We recommend Channel A to conduct a more thorough research on a broader and larger customer base using the program we developed. The analysis and interpretation of results are similar to those given above. Conjoint study should also be conducted regularly to monitor the changing preference of the customers.

When interviewing the customers for our conjoint study, we also surveyed on improvements and new area of interest they would like to see. The following findings are noted:

1. Creating a new area of interest in Asian Sports. This may include reporting the results of the J-League soccer in Japan, table tennis in China, badminton in Indonesia and Malaysia, etc. Related sports equipment can be advertised in this area.
2. Creating a free bulletin board for customers to exchange views for collective items such as Tamagotchi. Though this will not generate direct revenues, it will help to build up the “brand name” of Channel A.

## 2. Diffusion Model

The main focus of the diffusion model is on communication channels in which information about an innovation (the introduction of Channel A in our case) is transmitted to or within the social system. The purpose of the diffusion model in our work is to focus on the development of a life cycle-curve, to depict the successive increase in the number of adopters/visitors, and to predict the continued development of a diffusion process already in process. We adopt the Bass model in our work.

**Bass model:** 
$$n(t) = \frac{dN(t)}{dt} p(m - N(t)) + \frac{q}{m} N(t)(m - N(t))$$

$$\text{where } N(t) = m \left[ \frac{1 - e^{-(p+q)t}}{1 + \frac{q}{p} e^{-(p+q)t}} \right]$$

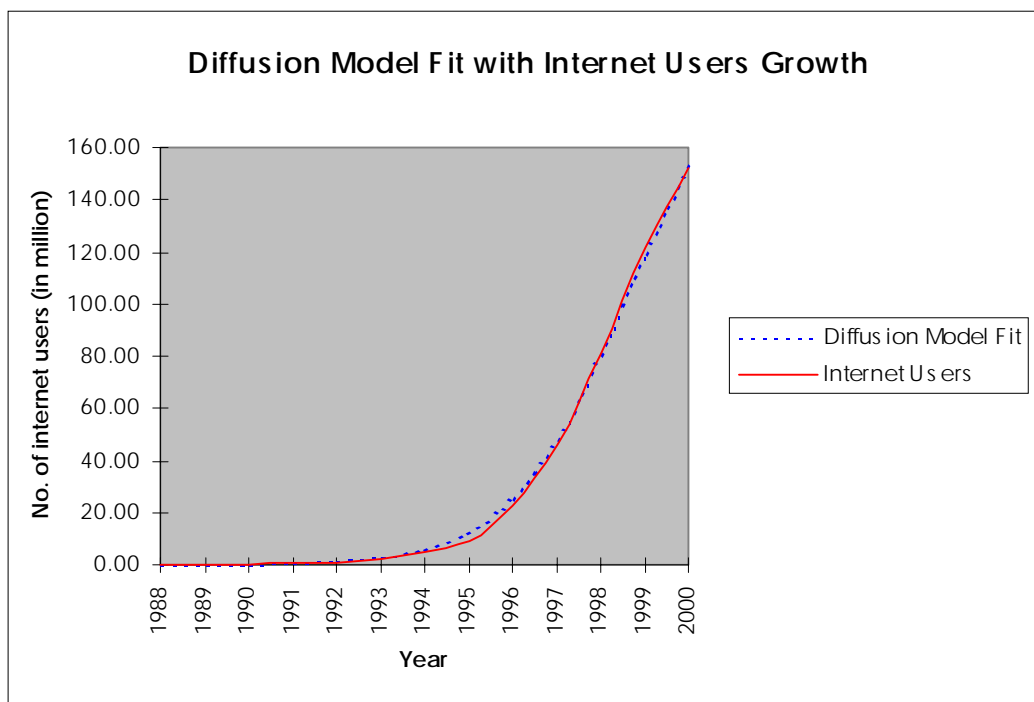
**m** = the market potential; the total number of people who may eventually visit Channel A  
**p** = the coefficient of external influence (innovators); the likelihood that somebody who has not yet seen the web site will come to visit it because of mass media coverage or other external factors.

**q** = the coefficient of internal influence (imitators); the likelihood that somebody who has not yet seen the web page will come to visit it because of the "word-of-mouth" effect or other internal factors.

**N(t)** = Cumulative number of visitors

Channel A is the first and only company that targets the Asian-Watcher segment in the Internet marketing industry. Thus there is no past data for us to trace and predict its traits of growth. Since all the company's work is carried out in the Internet environment, its growth must be highly correlated with Internet growth. Therefore, in our diffusion model, we used the rate of growth of the Internet as the rate of growth of Channel A.

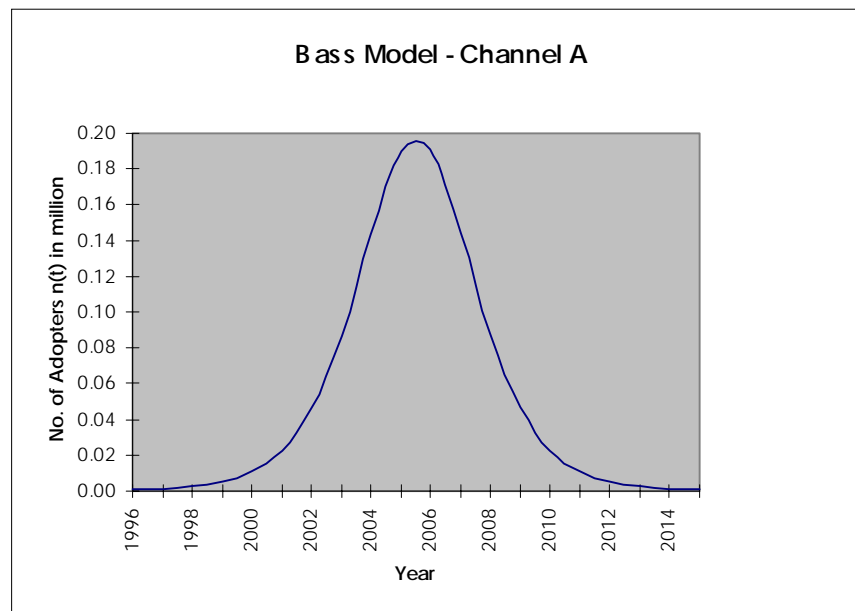
First, we fitted the Internet growth data into Bass's diffusion model. We found from our research<sup>1</sup> the number of Internet users between the year 1988 to 1997 and a prediction of growth thereafter until the year 2000. From the same article, we obtained an estimate of the total market potential (m) to be 200 millions. Setting the number of Internet users obtained from our research equal to the number of Internet users calculated from the diffusion model, we used Excel Solver to obtain the parameters p to be 0.00022 and q to be 0.77660. A plot of the number of Internet users from our research versus that calculated from our model is shown in Figure 6.



**Figure 6 Diffusion Model Fit with Internet Users Growth**

<sup>1</sup> Morgan Stanley Research Report

We then used the same  $p$  and  $q$  for Channel A's diffusion model. The only remaining parameter left is  $m$ . We found an estimate of the total Asian-American population to be 17 millions in 2010<sup>2</sup> and 40% Asian-American households own computers<sup>3</sup>. This amounts to a total number of 6.8 millions<sup>4</sup> Asian-American who have access to computers. Among this group of people which constitutes to the main source of Asia-Watcher on the Internet. We estimated that 15 percent of the Asian-American population would be a reasonable estimate of the Channel A's total market potentials taking into account that the number of non Asia-Watcher could be offset by the number of Asia-Watcher from other ethical groups. We thus assumed the market potential ( $m$ ) for Channel A to be 1.02 millions<sup>5</sup>. With these parameters ( $p$ ,  $q$  and  $m$ ) mentioned above, we proceed to use the diffusion model in our analysis. The status quo forecast of adoption ( $n(t)$ ) and cumulative adoption ( $N(t)$ ) are shown in Figure 7 and Figure 8 respectively. The details of the calculation are given in Appendix IV.



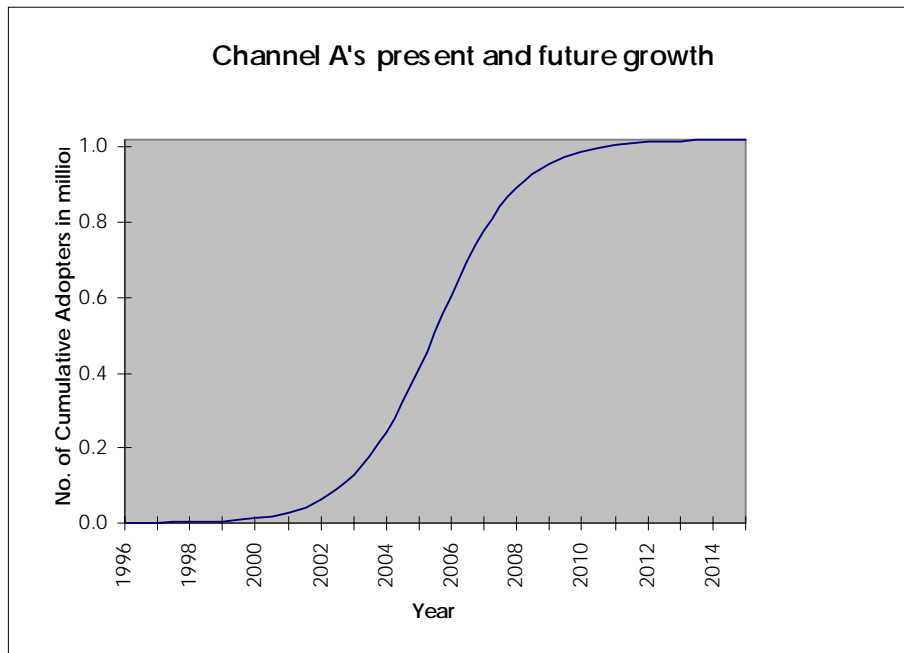
**Figure 7 Number of Adopters of Channel A**

<sup>2</sup> U.S. Census Bureau; Market Segment Research.

<sup>3</sup> National Telecommunications and Information Bureau, Wall Street Journal.

<sup>4</sup> 17 millions x 40% = 6.8 millions.

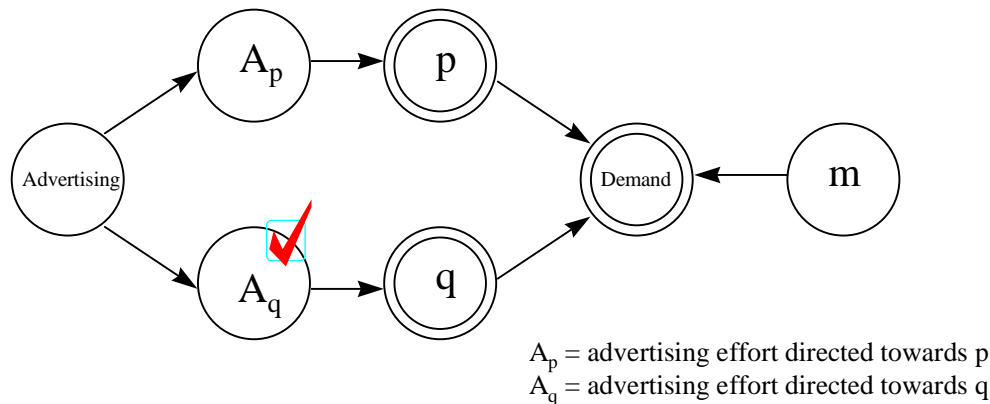
<sup>5</sup> 6.8 millions x 15% = 1.02 millions.



**Figure 8 Cumulative Number of Adopters of Channel A**

A key aspect of Bass model is that it deals with the market in the aggregate and can be applied to measure the number of adopters of Channel A by a certain time  $t$ . With this information, Channel A can better plan how their marketing and other strategies should be implemented at various stages. One useful implication of the model is that it provides an adoption forecast that can reflect the future revenue of the company at different point in time in the status quo case. This in turn also reflects the budget available for its advertising strategy at different time frame.

From analyzing the model, we found that the parameter  $q$  contributed the most to speeding up the rate which Channel A captures its market share. Due to Channel A's limited budget constraint, Channel A should focus its resources and employ the advertising strategy which increase  $q$  rather than increase  $p$ . We see the "word of mouth" effect from customers has a big impact in increasing  $q$ . Thus, Channel A should apply our Conjoint Analysis results to identify customers preferences and provide services better tailored to customers' interests. Customers satisfaction contributes most to the spread of the "word of mouth" effect and in turn enhances the growth of Channel A.



**Figure 2.1 Advertising and Demand Relationships**

### 3. Optimization

In this part, we focus on how to allocate Channel A's advertising resources on different available media. Our objective is to determine the optimal mix of advertising subject to limited budget constraint. There are two possible scenarios (as described by Channel A):

1. High budget : \$200,000/year (include a fixed PR cost of \$50,000)
2. Low (current) budget : \$100,000/year (include a fixed PR cost of \$50,000)

Our input in the optimization model are the prices and effectiveness of different advertisements and the budget constraints of Channel A which we have obtained the information from Channel A, Internet and customer reports.

Also, we assume that there are no seasonal variation(no time value) in the five categories.

Based on the inputs and assumptions above, we can formulate the problem as shown below.

Let  $C$  = budget of Channel A  
 $E_j$  = effectiveness of the  $j$  th medium  
 $P_j$  = price f the  $j$  th medium  
 $I_j$  = indicator of whether  $j$  th medium in the optimal mix ( 0 = in the optimal mix, 1= not)  
 $j = 1$  to  $M$  (total of  $M$  available media)  
 then,  $\text{Max}(IE)$  s.t  $IP < C$

The output of the model will be the optimal mix of advertisements, the total expenditure and effectiveness of the optimal mix.

We set up a template of this formulation by using MS Excel. With the help of solver macro, an optimal mix of advertising media along with the corresponding total expenditure and effectiveness would be given by plugging in the specified inputs. Appendix V shows the template format.

Based on the current information of all the applicable media, we use this template to find out Channel A's optimal mix of advertising media for both high and low budget scenarios (See Appendix V for details). In the low budget case(\$50,000 after the deduction of the PR cost), we choose four magazines which are Internet world, Natural way, Net Guide, and Eating Well. We find the total effectiveness of the optimal mix is 4,146,142 which reflects the number of potential readers of Channel A's advertisement. In the high budget case (\$150,000 after the deduction of the PR cost), we choose five magazines which are Entertainment, Natural Health, Natural Way, Net Guide, and Eating Well. In this case, our total effectiveness is 28,050,270. We compare the low budget case with the high budget case, there is a big difference of total effectiveness. However, there may be some limitation in the estimation of effectiveness in this example. As discussed in the project proposal, the best way to estimate the effectiveness of each medium is to measure the growth of the number of customers and the increase in the hit rate of Channel A's home page due to a specific advertisement. However, we currently estimate this number by using the total average paid circulation given by each medium. These numbers may not be extremely accurate but it does give the correct order (if we assume the readers of all

magazines have the same potential to be Channel A's customers). If there is any other more reliable way to estimate this number in the future, such as measuring the increase in sales of the products due to a specific advertisement by the proposed survey (which is still in the designing stage), the marketing manager of Channel A can always update our template by just few key strokes. We set up our template in an easy to update format, so that if there is any future scenario changes, such as effectiveness change of any medium or advertising budget change, our template can still be useful to Channel A.

## Conclusion

Our Five Forces analysis has indicated that one of the most important task Channel A should focus at the moment is to create a superior brand name. Ensuring customer's satisfaction is the only way to achieve this. Based on our conjoint analysis, we recommend that Channel A should focus its marketing effort in Arts & Entertainment, Business and Food to meet the general preference of the customers, and consequently building its "brand name" and creating its awareness. Once a large pool of customers is attracted, it can then consider to shift its strategy to generate more interests in Health & Wellness and Community. Furthermore, a low product price range, short delivery lead time and frequent web page update rate would also help Channel A to grab more customers. A program for conjoint analysis was developed and passed to Channel A for future use.

We also use the diffusion model to project the growth of Channel A's market. Our analysis shows that the growth is very sensitive to the "word of mouth". This again stress the importance of customer's satisfaction.

With the results of the above analysis, we use optimization to effectively allocate Channel A's limited budget to the various advertising media. This addresses Channel A's immediate need. An easy to use spreadsheet was developed and given to Channel A for future use.

It should be noted that we did not merely present our results to Channel A. We went through the entire analysis with its marketing manager to explain to her how data could be updated into our model for their future usage.

## After Thoughts

In general, we found the course very interesting as it gave us an opportunity to learn the various methods of strategic analysis and applied them to real world problem. We particularly like the first part of the course as it equipped us with the necessary tools for our project. We also gained valuable experience through the interaction with the sponsor.

However, we did encounter some difficulties which we thought were worthwhile to highlight:

1. The very first difficulty we faced was looking for a sponsor. We basically had spent our first two weeks searching for suitable sponsor that could allow us to apply the various strategic methods. But since our project only span for 10 weeks time, with such scarce time for work, we should utilize it most effectively. We do think it is a good experience to have the freedom of finding our own project sponsors, but time is too critical for us in our case. So we have two suggestions to solve this problem, one is to extend this course to two quarters, the other one is to have students who plan to take this course to look for project sponsors in the Winter quarter.

2. The second difficulty we faced was not having enough time to gather sufficient data to perform our strategic analysis. Most of the strategic analysis we used required a long time frame for data collection and our sponsor did not keep historical data base for future marketing analysis. As a result, we did not have enough data to perform our analysis and all we can do is to build up a strategic model and taught the company how to apply the model in the future if sufficient data were gathered.

Nevertheless, we certainly enjoyed the course and would recommend and encourage future students in EESOR department to take this course. We would also like to take this

opportunity to thank Margaret Ng, the Marketing Manager of Channel A for all her assistance throughout the course of the project.