

The marketability of Aztech's smartphon controlled wireless internet protocol (IP) camera

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Abstract— This study was conducted to determine the marketability of Aztech branded smartphone controlled wireless IP Camera in terms of the product, the price and promotion. The study aimed to create a marketing plan for the IP camera product line for the Philippine retail market, which was guided by the results of the questionnaires that targets the marketing mix where Aztech, the manufacturer, is involved.

Based on the findings of the study the researcher concluded that the product design and specifications, price offering and promotion will play an important role on the marketability of the Aztech's smartphone controlled wireless IP camera. There is a significant indication of the marketability of the Aztech's smartphone controlled wireless IP camera for the Philippine retail market.

The researcher recommends Aztech's management and product marketing department to study the pricing structure of the product for the purpose of reaching more end users. For the sales executives, the researcher recommend that those who are involved with the actual selling of the product, should learn about the functions, features, the how tos, and the after sales service and support offered by Aztech that benefit end users. The researcher recommends consumers or end users to try out the Aztech's smartphone controlled wireless IP camera especially for the application of video monitoring.

Keywords- Advertising, Design, Features, Flexibility, Function, Housing type, Installation, Marketability, Price, Promotion, Reliability, Resolution, Sales

I. INTRODUCTION

The Philippines belongs to the world's top 50 countries with the most number of fixed and mobile broadband subscribers. Fixed and mobile broadband users in the country are increasing as the infrastructure of the telecommunication companies continues to expand and upgrade. Expansion covers larger areas normally growing from the metropolitan area to neighboring provinces. Infrastructure upgrade allows the broadband network to offer faster service to subscribers and minimize downtime.

Quezon City is at the center of the country's rapidly developing telecommunications network. The city is one of the first areas to enjoy services, promotions and benefits from infrastructure upgrades of the telecommunications company. Quezon City has a population of over 2.7 million with over 600,000 households. It is also booming with condominium construction sites from different high rise private housing developers which tend to attract residents from the neighboring cities.

Home monitoring was previously viewed as luxurious. Analog cameras coupled with video recorders and complicated setup and installation can only be availed by those who have extra resources to spare. Monitoring, surveillance and recording using a camera or a close circuit TV system is just too expensive and experts are needed to be hired to install the system. These systems are most being used by banks, private offices, critical public utility facilities and the likes. These systems also come with value added services such as night time viewing, remote access, pan, tilt and optical zooming which are top-ups on the price of the system. Remote access to these systems are interfaced with IP - Internet Protocol and digital communications, offered by telecommunications companies in the form of broadband services.

With the advancement of microcomputers and the internet, there have been numerous developments of derivative products like smartphones with broadband access, to cameras that interfaces digitally and software interfaces plus platform support to access multimedia - both video and audio. With the convergence of the key technologies that allow less expensive solutions to monitor homes using cameras from several platforms, there is an emergence of the market of smartphone controlled wireless IP cameras from different brands and one of which is from Aztech.

Wireless IP cameras controlled by smartphones are designed to be less complicated to install targeting the mass market of residential home owners with broadband subscription. It likewise removes the need to hire an expert to lay the cables and setup for recording, remote viewing and control for pan, tilt, and digital zoom.

For few years, the wireless IP camera market outside the Philippines has already been tested. There has been significant research and development on the challenges of using the device and improvements on the designs are on-going as the consumers' interest on the idea of checking what is happening at home increases.

The device is to be offered as a retail product from an IT or appliance store, where one walks in, picks it up from the shelf, purchase it, bring it home, and install.

A. Research Questions

This study aimed to assess the marketability of Aztech's smartphone controlled wireless IP camera in the Philippine retail market as basis for the creation of a marketing plan.

Specifically, it seeks to answer the following questions:

1. How may the profile of the respondents be described in terms of:

- 1.1 age,
- 1.2 monthly income,
- 1.3 occupation, and
- 1.4 housing type?

2. How can the marketability of Aztech's smartphone controlled wireless IP camera be described as to:

- 2.1 Product,
 - 2.1.1 function,
 - 2.1.2 features,
 - 2.1.3 reliability and flexibility,
 - 2.1.4 resolution,
 - 2.1.5 installation process and design,
- 2.2 Price,
- 2.3 Promotion
 - 2.3.1 advertising,
 - 2.3.2 sales promotion,
 - 2.3.3 public relations?

3. How may the findings be utilized in preparing a marketing plan for Aztech to push the product to the Philippine retail market?

B. Scope and limitation

This study was limited to the marketability of the Aztech's smartphone controlled wireless IP camera in Quezon City's residential population.

The study included information from potential end users of the camera, who were the respondents of this research. It involved residents of condominiums and subdivisions that subscribed to broadband services or would potentially avail of broadband services in the future.

C. Marketability

SingTel (2014), shows the competitive broadband service subscription and increasing speeds of access to the internet with the old ADSL and new optical fiber medium. As the speed for internet access continuously increases, applications to utilize the speed of the service are currently limited to slower bandwidth applications, like a lowly web browser. The service is underutilized. Imagine a 100 Mbps broadband offered by the Internet Service Provider, if the subscriber only uses the service to surf web sites, the sites would load in an instant, then what, and the bandwidth pipe is free. Different applications and devices can utilize the broadband speed and unused bandwidth like server-hosted games, network storage devices, peer-to-peer applications for file sharing and surveillance applications just like an IP camera that can be controlled using a smartphone.

According to the National Statistics Office (Jul 2013), the National Capital Region of the Philippines comprises 8,124,000 Filipinos that are aged 15 years old and above, which are considered to be part of the labor force. The Philippine Department of Labor and Employment reports in July 2013 that the National Capital Region labor force participation rate is 64.3 percent that is equivalent to 5,223,000 Filipinos. Employed Filipinos at the capital region sums up to 4,652,000 (89.1%) and unemployed is 571,000 (10.9%). It is crucial to look into the purchasing power for the target market. This can be traced by looking into the target users of the product the researcher wished to push to the retail market. Population, employment rate and wages of the employed are important information that can be obtained from government agencies.

The National Statistics Office (2013), reports that the average daily basic pay of wage and salary workers is 505.13 Philippine Pesos. Basic pay means that it's the payment for normal time before deductions of the social security contributions, withholding taxes but includes allowances, bonuses, commission, overtime pay and other benefits in kind.

Caputo (2010), Surveillance applications developed greatly since the 19th century when visual surveillance was studied and used by prison officials to observe and discover the escape methods of the prisoners on their facilities. It was in the mid-twentieth century that the surveillance expanded to include security of property and people which was initiated by governments, banking institutions and casinos. Surveillance cameras capture will be developed and printed on private dark room facilities and analyzed at a later date if there were questionable activities discovered.

Caputo (2010), listed the theory behind video surveillance which remained the same since visual surveillance was founded.

1. **Deterrence.** If potential criminals are aware of the possibility of being watched and recorded, they may determine that the risk of detection far outweighs the benefit. Countries all over the world use video surveillance, focusing its use mostly on public transportation and select public areas. Based on an Urban Eye study (www.urbaneye.net), 86%

of these international installations are for detection of theft, and 39% also serve as deterrent of violent crimes.

2. Efficiency. Reviewing video surveillance at the same time watching the live video stream provide better information about a situation. It equips the users to make decisions on the right kind and number of resource to send for the situation.

3. Capable guardian. Video surveillance today includes sophisticated software analytics with the capability of monitoring areas for programmable situations (e.g. bookmark all red automobiles) such as abandoned cars or back packs, circling vehicles, or even specific license plates. Active software allows the video surveillance system to alert and respond to a potential criminal activity.

4. Detection. Detection is a higher profile success factor, providing tangible evidence that video surveillance works. Britain is known for its video surveillance system, providing law enforcement with the ability to follow anyone throughout the city of London through the use of over 200,000 cameras (with 4 million cameras throughout the country). This system helped to locate London-born terrorist including the well-publicized CCTV image of the suicide Bomber Hasib Hussain. Furthermore, Scotland Yard convicted 500 criminals using their CCTV database that included 3 years of data on 7000 offenders.

An IP based camera is installed for home surveillance, deterrence of criminal activity is the immediate benefit of the home owner especially when it is installed on a strategic location.

With the advent of modern and cost effective techniques in manufacturing, several electronic products manufacturers involved in data communications are investing in development, design and manufacture of IP based cameras. This signals the growth of a market for a consumer good. The interest level from the companies who gave us the affordable data communications, phones and other electronic products is increasing. Proof of this emerging market for IP cameras meant to be sold as a consumer good are the advertisement of the IP cameras and some marketing reviews pushed by different brands on specialized and general interest magazines (Hardware Magazine Singapore, March and April, 2012).

Tan (2013), on one of his reviews about the Aztech wireless IP camera, he described that the wireless IP camera was reliable for surveillance and captures high resolution and crisp video feed. Nowadays, a design is not exclusive to any of the electronic devices manufacturers, in fact the integrated chip package for most of the electronics devices today are shared by different manufacturers. One manufacturer can develop a hardware that performs similar to other brands. The only distinction will be the cost structure, design and value added services that can be felt after an end user acquires the device. User's age range and population, tells us that the developing country like the Philippines has a considerable number of potential users of the product. These users are having the basic requirement, connectivity via IP, to install and operate the product.

Singapore Hardware Magazine's review and

advertisements, provides us with an understanding of the different packages or design of an IP camera and the bundled features and value added services that come with different model of the IP cameras.

BCG's report (2012), show us the preference of the consumers when it comes to the made to label or the product's country of origin.

Horowitz (2010), describes the demand for the IP cameras in the US and the demand from educational institutions and other business establishments.

Balagua (2011), on his study, concluded that the Philippine consumers are very sensitive to price and does not care about branding as long as the purchase is giving the same benefit as the other product that is more expensive.

Salonga (2004), studied the effect of on-line marketing, this is an area where Aztech is involved in and was included on the study on the marketability of an electronic product that is with complex specifications that the target consumers might not be familiar with. Dela Pena (2008), presents the price and promotion components on marketing a product.

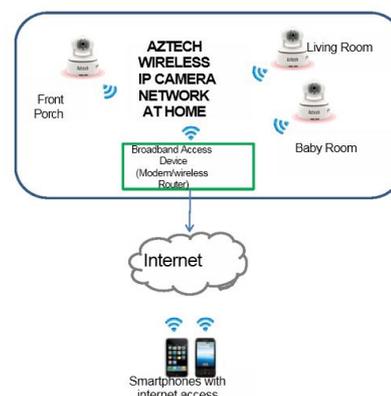


Figure 1. Wireless IP Camera Setup Diagram

D. Research Paradigm

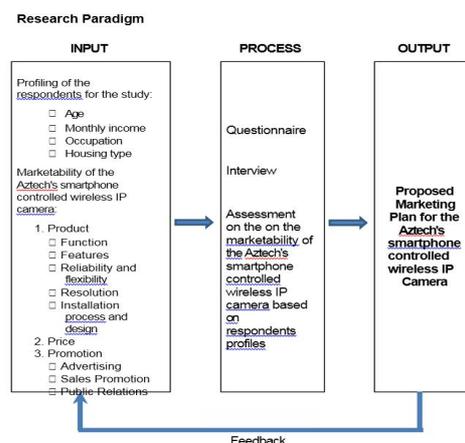


Figure 2. Research Paradigm

The diagram above shows the steps that were taken for the study of the marketability study of Aztech's smartphone controlled wireless IP camera. The inputs are the respondents profile and the answers to the questions about the product, specifications, price and promotions. The gathering of the data, which is part of the process, was done using interviews and questionnaires. Another process is the assessment of the responses to the questionnaires. After the assessment of the results, the findings were analyzed and based on the findings a proposed marketing plan was created.

II. METHODOLOGY

The researcher used the descriptive qualitative research methodology or statistical research. Statistical research describes data and characteristics about the population being studied. Statistical research answers the question of who, what, where, when and how. The researcher also used qualitative research methods. Qualitative research aims to understand the human behavior and the reasons that govern such behavior.

The respondents were composed of 100 potential end users and 10 retail store sales agents that were chosen randomly from the population in the research environment who were the potential end users of the products and agents who were tasked to help promote the product on retail shops.

The number of potential end user respondents was based on the population of Quezon City which is 2.7 million (www.nscb.gov.ph, 2013), about 68, which is 0.0024% similar to the percentage used by the leading opinion polling company that is conducting social surveys on registered voters in the Philippines. The number was increased to 100.

For the retail store sales agent respondents, the number was 10, which would represent approximately 25% of the shops at a major mall that created a special section for stores that sells computer and IT related goods. The researcher used cluster sampling technique for the potential end users. The respondents from the potential end users were grouped to represent a small scale population of the population. The end users were the customers of the retail store, who had the potential to buy and use the Aztech smartphone controlled wireless IP camera.

Purposive sampling was used for the retail sales agents. The researcher specifically identified the characteristic of the respondents, which was, the type of job as a sales agent. The retail sales agents were employees of the retail stores where the product was targeted to be sold.

In order for the researcher to gather the necessary data for the study, the instruments that were used are questionnaires and interview.

Questionnaires were used as the main instrument for this study. Some of the respondents were invited to attend the product presentation and a demo was conducted. The questionnaires were distributed to the attendees at the end of each demo session. Other respondents were presented with

the product, the product specifications and the online demo of the wireless IP camera. An online survey form were be presented to the respondent after their review of the product.

The questionnaire aimed to gather information about the respondent's profile, like their age, monthly income, occupation, and the housing type they live in. The questionnaire also aimed to get feedback from the respondents on the product quality for the product positioning and likely features, and usability enhancements.

There was a portion on the questionnaire that aimed to gather information on the price that the end users are willing to pay for the product, the type of sales programs that they were interested in and insights on the public relations and advertising that they look at when they purchase such products.

Some of the respondents were invited to attend a pre-scheduled product presentation and product demo. The presentation and demo aimed to educate the respondents and to provide them with enough information about the product's application. At the end of the product presentation and product demo, the respondents were provided with a questionnaire to gather the data required for the marketability study.

Other respondents were presented with the product, product specifications, and an online demo of a live camera. This is to provide more information to the respondents that allowed them to understand the items asked on the survey questionnaires. Once they were aware of the product, an online form was either sent to their email for them to answer or the online form was filled sort right after their assessment.

The questionnaires were validated by the researcher's adviser, and two marketing professionals who were experts in their own fields.

Upon receiving the form from the respondents, the researcher immediately separated those forms filled with a monthly income of Php 15,000 and below, they were unlikely able to afford the product based on the current suggested retail price.

A draft of the results was generated. The questionnaire was tested again with another 10 people, representing 10% of the original potential end users of the product. An interview to follow was conducted to ensure the validity of the responses. A final copy of the results was provided to the researcher's adviser for comments and revisions.

The researcher required help from Aztech Electronics Philippines staff for the product presentation and demo. The researcher got staff from the office to administer the questionnaires after the presentation and demo. After the respondents answered all the questions, completely the same staff member collected the questionnaires. For the other respondents, the same staffs from Aztech's office introduced the product to their friends and relatives and request for them to fill up the survey questionnaires.

Interviews were conducted by the researcher or the researcher's assistants with some of the end users and the

retails sales agents. The interviews were not be guided. During the interview, the respondents were encouraged to ask questions about the product.

III. RESULT AND DISCUSSION

This study was conducted to determine how the marketable is the Aztech branded smartphone controlled wireless IP Camera in terms of the product, the price and promotion in the Philippine retail market. The following summarizes the findings of the study.

1. More than half of the respondents were from 28 - 37 years age range. The monthly income of all the respondents was more than PhP 15,000 and the majority of the respondents were earning more than PhP 30,000. Almost all of the respondents are employed or owners of businesses. Majority of the respondents are employed in IT related occupation company. The majority of the respondents were living in subdivisions.
2. Product's marketability as described by the respondents was with an overall mean score of 4.53. Product functions were excellent with an overall mean score of 4.64. Product features assessment was excellent with an overall mean score of 4.60. Reliability and Flexibility were with an overall mean score of 4.76. Resolution was very good with overall mean score of 3.89. Installation and design were with overall all mean score of 4.80 which was excellent. Price, 79.53 percent respondents were willing to buy the Aztech's smartphone controlled wireless IP camera at the suggested retail price of PhP 4,500. The sales agents responded that they could sell the Aztech's smartphone controlled wireless IP camera at a suggested retail price range of PhP 4,000 - 4,500. On promotions and advertisements, the respondents were primarily accessing the internet and email followed by television and by brochures as sources of information when it comes to learning what was new and checking out the trends for consumer electronic products. For sales promotions, the respondent were likely to buy the Aztech's smartphone controlled wireless IP cameras using gift certificates and in the running for the promo consideration was the price packs. For public relation activities, the respondents would purchase the Aztech's smartphone controlled wireless IP camera when they saw the manufacturer participate or organize trade shows, product launch and seminars.
3. Aztech will have good base line information about the target market. Aztech can use this information to understand the needs of the market and create a marketing plan for the products and value added services that addresses these needs to better serve the market. As part of the marketing plan, the distributor together with Aztech should drive activities that spread awareness and information about the brand and the product to the target market.

IV. CONCLUSIONS

1. Potential end users who are employed, aware of the product and earning a monthly income more than PhP15,000 are likely to buy an Aztech's smartphone controlled wireless IP camera. The other characteristics of the respondents profile like the housing type, the age and occupation does not impact the marketability of the Aztech's smartphone controlled wireless IP camera.
2. Overall product design, price offering and promotion are important attributes that play a major role on the marketability of the Aztech's smartphone controlled wireless IP camera. Price is the most important attribute of the marketing plan for this study, if the price is set too high, not all of the target customers are willing to buy the camera at a high price. The suggested price range from the point of view of the retail sales agents is acceptable, thus, saleable. There is a significant indication of the marketability of the Aztech's smartphone controlled wireless IP camera for the Philippine retail market as reflected by its price, product specifications and promotional programs that will be undertaken by retail stores.
3. The findings of the study were utilized by Aztech for their marketing plan for the smartphone controlled wireless IP camera.

V. RECOMMENDATIONS

The following section presents the recommendations based on the conclusion of this study.

For Aztech's management and product marketing department,

1. To consider lowering the suggested retail price to reach more potential end users.
2. To ensure that product is manufactured with high quality components to address the need of the market on reliability.
3. To continue with software developments to improve the user experience and enhance the features.
4. To organize or participate on trade shows activities, road shows, product launching and product seminars.
5. To ensure to retain the basic features and function of the first model of the Aztech's smartphone controlled wireless IP cameras on new and better models.
6. To maintain a service centre and support hotline for the after-sales service and support, which may not be offered by competitors, to bring more value to the brand

For the sales executive,

1. To learn about the functions and features of the product.
2. To familiarize themselves with the ongoing promotions running with the product.
3. To sell the brand, learn about the after sales service and support and warranty which may be lacking from the

competitor brands.

For the **end users** to use the unit if they have

1. A child or baby whom they want to check out from time to time when they are away from home.
2. A house that is always left unattended during daytime because the residents are away for work.
3. An elderly who needs constant monitoring.
4. Household helper that needs to be monitored and guided.
5. An important property that is left at home unattended.
6. A house that is located in a not so good neighborhood.

For **future researchers**,

1. To continue the next stage of research for the Aztech's smartphone controlled wireless IP camera that is field testing and evaluation.
2. To gather feedbacks and enhance product design for existing or newer and better models.
3. To research on the marketability of a network video recorder for smartphone controlled wireless IP cameras. The respondents of new study should be users of the smartphone controlled wireless IP camera.

REFERENCES

- [1] Balagua, Rodelio F., "*Marketability of Generic Drugs: Determinants and Indicators*", Masteral Thesis, New Era University, 2011.
- [2] Boston Consulting Group, (2013). U.S. and Chinese Consumers Willing to Pay More for Made in USA Products. Retrieved from <http://www.bcg.com/121840>
- [3] Caputo, Anthony C., (2010). *Digital Video Surveillance and Security*, USA: Elsevier Inc.
- [4] dela Peña, Ryan C., "*The Marketability of Japan Surplus Industrial Equipment*", Masteral Thesis, New Era University, 2008.
- [5] Espejo, Roman, (2013). *Smartphones*, Detroit: Greenhovens Press
- [6] Horowitz, Alan S., (2010). *IP Video Surveillance: A Market Worth Watching*. Retrieved from www.ingrammicro.com
- [7] International Telecommunication Union, (2011). *ICT Facts and Figures*. Retrieved from www.itu.int
- [8] Kotler, Philip, et. al. (2012). *Marketing Management: Fourteenth Edition*, England: Pearson Education Limited.
- [9] National Statistics Coordination Board, (2013). *Population and Registered Voters*, Retrieved from www.nscb.gov.ph
- [10] National Statistics Office (2013), Household Population 15 Years Old and Over and Employment Status: Philippines: 2011 - July 2013. Retrieved from www.bles.dole.gov.ph
- [11] Ng Chong Seng, (2012, April). Big Brother Is Watching, Four Wireless VGA Cameras Compared, HWM Singapore, 137, 86-93.
- [12]
- [13] Salonga, Razzel I., "*The Effect of On-line Marketing on Food Businesses*", Masteral Thesis, New Era University, 2004Trendnet [Advertisement]. (2012). *HWM Singapore*, March 2012, 69.
- [14] Singapore Telecommunications Ltd, (2014). *Home Broadband Bundles*. Retrieved from www.singtel.com
- [15] Tan, Aaron, (2013). *Aztech WIPC408HD Wireless IP Camera: Editor's Review*. Retrieved from www.digitalone.com.sg