

A STUDY OF CUSTOMER SATISFACTION AND PERCEIVED
VALUE RELATIONSHIP IN CONQUAS AND QCLASSIC
CERTIFIED HOUSING PROJECTS

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To my beloved wife, family and friends
in memory, my mother Che Siti Hamzah

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ABSTRACT

Construction activities in Malaysia, as in many developing countries are growing tremendously which generate towards the nation Gross Domestic income. With the growing numbers of developments specifically build to cater for the growing demand for the residential, commercial houses, specific quality standards has to be developed in order to regulate the standard quality that the contractors will need to deliver. This is where the Construction Quality Assessment by Building Construction Authority (BCA Singapore) and Quality Assessment in Construction (QLASSIC) by CIDB Malaysia being developed to set certain benchmarking standard for the building quality. A lot of occurrences reported in the news where the purchasers of the houses were not satisfied with the quality level for the houses being delivered. This study is conducted to understand the customer satisfaction level for unit being handover to purchasers after being assessed through CONQUAS assessment and compare it against development being assessed through QLASSIC assessment. The methodology adopted is through the data comparison for the customer satisfaction level by the purchasers whom development is being assessed by CONQUAS and compared it against the customer satisfaction level by purchasers for development assessed by QLASSIC assessment. By applying the CONQUAS/QLASSIC assessment, it indirectly acts as marketing tool to set benchmark quality level for building and assured customer of minimal complaints related to residential defects upon handover of their keys. The objective of this study is to relate the CONQUAS/QLASSIC to customer satisfaction and establish relationship to customer perceived value of the residential housing. Very few academic research linking on the application of CONQUAS and QLASSIC standards to customer satisfaction can be found. Hopefully, this research will add value to the pool of academic research in understanding the benefit of implementing CONQUAS/QLASSIC standards towards increasing the market value of the property marke

ABSTRAK

Aktiviti pembinaan di Malaysia semakin pesat berkembang sebagai negara yang sedang membangun dan ia menyumbang kepada perolehan Keluaran Dalam Kasar Negara. Peningkatan ketara untuk aktiviti pembinaan di seluruh negara dapat di lihat dengan meningkatnya permintaan untuk pembangunan kediaman, komersial dan juga infrastruktur. Namun jika pembangunan ini tidak dikawal selia dengan penggubalan polisi berkaitan kualiti yang baik, ia akan merencatkan program pembangunan ini. Dengan sebab itu, standard CONQUAS dan QLASSIC telah digubal untuk mengawal selia kualiti dan di tetapkan sebagai penanda aras bagi hasil kerja “workmanship” dalam sector pembuatan. Dengan adanya standard kualiti sebegini, pihak pemaju dan kontraktor sepatutnya dapat menghasilkan produk yang dapat memuaskan hati pembeli rumah. Namun begitu, terdapat kes yang telah di laporkan di dalam media terhadap ketidakpuasan hati pemilik kediaman apabila mereka masuk ke rumah impian mereka. Tujuan kajian ini, untuk mengkaji kepuasan hati pelanggan bagi projek yang telah dinilai oleh CONQUAS dan QLASSIC serta membuat perbandingan jika ada perbezaan diantara dua standard itu. Data yang diperolehi akan di analisa atas tahap kepuasan pelanggan untuk projek yang telah di nilai melalui CONQUAS oleh BCA dan QLASSIC oleh CIDB. Kajian terdahulu menunjukkan bahawa CONQUAS/QLASSIC berkesan sebagai alat pemasaran untuk menetapkan tahap kualiti pembangunan terbabit dan mengurangkan ketidakpuasan hati pelanggan semasa penyerahan kunci rumah. Kajian ini juga akan cuba merungkai CONQUAS/QLASSIC kepada tahap kepuasan pelanggan dan kesannya kepada harga susut nilai rumah terbabit. Kajian terdahulu amat sedikit dalam mengkaji tahap kepuasan pelanggan. Di diharapkan, kajian ini dapat memberi nilai tambah dalam merungkai perbezaan yang dapat di peroleh daripada pelaksanaan CONQUAS/QLASSIC di projek berkenaan dan impaknya kepada kepuasan pelanggan seterusnya kepada tanda aras nilai pasaran hartanah.

TABLE OF CONTENTS

CHAPTER	CONTENT	PAGE
	DECLARATION	ii
	DEDICATIONS	iii
	ACKNOWLEDGEMENT	iv
	ABSTRACT	v
	ABSTRAK	vi
	TABLE OF CONTENTS	vii
	LIST OF TABLES	x
	LIST OF FIGURES	xii
	LIST OF ABBREVIATION	xiii
	LIST OF APPENDICES	xiv
1	INTRODUCTION	1
	1.1 Introduction	1
	1.2 Problem Statement	6
	1.2.1 Why compare CONQUAS and QLASSIC?	7
	1.3 Research Questions	8
	1.4 Research Objectives	9
	1.5 Significant of Study	9
	1.5.1 Academic theory	9
	1.5.2 Practical / organization	10
	1.5.2.1 Cost comparison CONQUAS/QLASSIC	10
	1.6 Scope of Study	11
	1.7 Thesis Outline	12
	1.8 Operational Definition	13

2	LITERATURE REVIEW	
2.1	Introduction	15
2.2	Importance of Customer Satisfaction and Quality	15
2.3	Customer Satisfaction	17
2.3.1	Definition of customer satisfaction	17
2.4	Customer Satisfaction Theories	17
2.4.1	The expectancy Disconfirmation Theory	18
2.4.2	Berry Broeder's Domain of Satisfaction	19
2.5	Quality of Goods or Products	22
2.5.1	Quality in housing	24
2.5.2	What is CONQUAS standard	26
2.5.3	What is QLASSIC standard	29
2.5.3.1	Assessment approach and sampling process	30
2.6	Review of past research	33
2.7	Construction workmanship quality towards customer satisfaction in quality housing	35
2.8	Measurement of customer perceived value	36
2.9	Customer satisfaction and perceived value	39
2.10	Hypothesis questions	43
3	METHODOLOGY	
3.1	Introduction	44
3.2	Research design	46
3.2.1	Extent of researcher interference	46
3.2.2	Unit of analysis	46
3.2.3	Population of study	46
3.2.4	Research sampling	47
3.3	Research instruments for data collection	47
3.3.1	Section A	48
3.3.2	Section B	48
3.3.3	Section C	50
3.3.4	Section D	50
3.4	Sample size	51
3.5	Data collection method	52

3.6	Validity	52
3.7	Reliability	53

4 DATA PRESENTATIONS AND ANALYSIS

4.1	Introduction	54
4.2	Research reliability	54
4.3	Objective 1 Analysis	57
4.4	Objective 2 Analysis	58
4.5	Objective 3 Analysis	60

5 DISCUSSION AND CONCLUSION

5.1	Introduction	62
5.2	Objective 1 Explanation	62
5.3	Objective 2 Explanation	65
5.4	Objective 3 Explanation	66
5.5	Contribution of study	67
5.5.1	Academic	67
5.5.2	Practical	67
5.6	Limitation of research	68
5.7	Recommendation for future research	68
5.8	Conclusion	69

REFERENCES	71
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APPENDICES	79
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LIST OF TABLES

TABLE NO.	TITLE	PAGE
1.1	Estimated cost comparison for implementation	11
2.1	Garvin quality dimension of tangible product	23
2.2	Weightage of CONQUAS by building category	27
2.3	Weightage of Architectural CONQUAS element	28
2.4	Tools used for assessment	29
2.5	Weightage of QLASSIC by building category	32
2.6	Weightage of Architectural QLASSIC element	33
2.7	Perceived value definition	37
3.1	Likert scale rating	48
3.2	Defects grouping guide for Internal finishes assessment CONQUAS & QLASSIC	50
3.3	Questions on perceived value	50
3.4	Summary of survey tabulated	52
4.1	Customer Satisfaction's Cronbach α	55
4.2	Perceived Value's Cronbach α	55
4.3	Demographic breakdown of the respondents	56
4.4	T-test for Customer Satisfaction	57
4.5	Mean analysis for detail element	57

4.6	T-test for Perceived Value	59
4.7	Mean analysis for detail characteristics	59
4.8	ANOVA analysis customer satisfaction on perceived value	61

LIST OF FIGURES

FIGURE NO.	TITLE	PAGE
2.1	The Expectancy-Disconfirmation Theory	18
2.2	Bly satisfaction level theory	19
2.3	Construction quality dimension	25
2.4	Lapierre customer Perceived Value	38
2.5	Customer satisfaction vs perceived value	39
2.6	Baum classification of Depreciation and Obsolescence	41
2.7	Framework of Research model	42
3.1	Brief methodology flowchart	45

LIST OF ABBREVIATION

ASQC	-	American & Society for Quality Control
ACSI	-	American Customer Satisfaction Index
BCA(S)	-	Building Construction Authority (Singapore).
CIS	-	Construction Industry Standard
CIDB	-	Construction Industry Development Board
CONQUAS	-	Construction Quality Assessment
ETP	-	Economic Transformation Programme
FIABCI	-	International Real Estate Federation
GFA	-	Gross Floor Area
JPN	-	Jabatan Perumahan Negara
MBAM	-	Master Builders Association of Malaysia
MS-ISO	-	Malaysia Standard – International Organization of Standardization
QLASSIC	-	Quality Assessment in Construction
PAM	-	Professional Arkitek of Malaysia
PWD	-	Public Work Department
REHDA	-	Real Estate and Housing Developer Association
SPSS	-	Statistical Packages for Social Sciences
TC	-	Technical Committee

LIST OF APPENDICES

APPENDIX	TITLE	PAGE
A	Sample of Questionnaires	79
B	Plan layout for phase 4B1	83
C	Plan layout for phase 4B2	84
D	Plan layout for phase 3A	85
E	Plan layout for phase 6B03	86
F	Cronbach α for Customer Satisfaction	87
G	Cronbach α for Perceived Value	88
H	T-test result for customer satisfaction	89
I	Mean analysis customer satisfaction (by element)	90
J	T-test analysis on Perceived Value	91
K	Mean analysis on Perceived Value (Characteristic)	92
L	ANOVA analysis Customer Satisfaction against Perceived value	93
M	Scatter plot of Customer Satisfaction to Perceived Value	94

CHAPTER 1

INTRODUCTION

1.1 Introduction

Poor quality in construction projects is a common phenomenon in the world. Many disputes happened among clients, house owners and parties involved in construction involving the key stakeholders in construction industry namely client e.g. property developer, appointed consultants and contractors on construction defects cases. Construction defects seen will be even more critical if it involves latent defect which will persists years after the completed units has already been occupied by the purchasers. When the purchasers bought their dream properties, they surely will expect for liveable houses which will be minimal in defects.

However, there have been numerous incidences where house purchasers expressed their dissatisfaction over the quality of workmanship and when they inspected their houses upon being handover the key to their houses. To some extent, some purchasers feel being false promised by the developer as they think actual unit

delivered did not meet their sign Sales and Purchase Agreement especially on the type of material used (e.g. marble tiling grades etc.).

Defects and variations in the construction products from standards is persistently a problem of concern in the construction industry in Ghana (Ali (2011), Baiden and Tuuli (2004). Ali et.al (2011) quoted Kazaz and Birgonul (2005), that the satisfaction of quality level in the construction projects has not been achieved and is a serious problem in Turkey. As for the construction quality standard in Malaysia, quality of certain construction projects in Malaysia are not always meet satisfaction (Ali (2011), Abdul Razak et. al. 2010; Pratt, 2000).

In Malaysia, cases of poor workmanship quality of residential properties highlighted in the mainstream media or new where homeowners lodged complaints to the district authority for their attention. For example, residents of Taman Bayu Damai, relocation projects for Refinery and Petrochemical Integrated Development (Rapid), have expressed their disappointment to the media over the poor land compaction in infrastructure work that leads to structural crack on their newly handover houses. They outrage was on houses which are less than a year old, have already started cracking with some wide enough to go through (Benjamin, 2014).

Referring to Sufian & Rahman (2008), one good example of housing defects can be found in KC Chan Brothers Development Sdn Bhd vs Tan Kon Seng, in year 2000, in which 26 buyers of low cost units complained that specifications of the building as shown on the approved plan has not been complied. Height of the double storey houses was only 18 feet high instead of 20 feet and asbestos ceiling missing with the septic tank short by 5 inches in dimension.

These few examples illustrate the real cases in Malaysia of unsatisfied home owners whom upon being handover the keys for their new houses were not satisfied on the quality of the houses. In the first case, the house owners went to the press to vent their anger in the hope that the municipal councillor or local authority will take

action on their problem while for the second cases, the house owners went to Home Buyers tribunal to seek for compensation on the sub-standard work or defects.

In order to address the sub-standards workmanship quality in construction, Malaysia government through one of its authorities Construction Industry Development Board (CIDB), has introduced the QLASSIC somewhere in the late 90's which led to introduction of QLASSIC guideline. Eventually in the year 2006, this document was reviewed and subsequently upgraded to Construction Industry Standard (CIS) known as CIS 7:2006, Quality Assessment System for Building Construction Works. The primary objective of CIS 7:2006 was to provide a benchmark on the standards that can be applied by the industry to measure quality performance of their respective construction projects objectively. (Mukhtar, 2013)

The main assessment elements in this standard are adopted from Construction Quality Assessment (CONQUAS) practices by Building and Construction Authority (BCA) in Singapore. Generally, the higher the QLASSIC score will proportionately reflect the higher quality output of the assessed construction project. (Mukhtar, 2013).

Construction Quality Assessment (CONQUAS) was introduced in Singapore in 1989 and serves as a standard assessment system on the quality of building projects. CONQUAS has been periodically fine-tuned to keep pace with changes in technology and quality demand of a more sophisticated population. Some contractors in Malaysia were already practicing this standard in order to obtain client satisfaction (Ahmad, Sabli and Othman, 2014; BCA, 2000).

Today, CONQUAS is widely recognized and accepted internationally as a benchmark tool for quality successfully adapted by countries like UK and Hong Kong (Norizan et. al, 2014; BCA, 2011). CONQUAS is now a registered trademark in Singapore, China, Hong Kong, United Kingdom, Australia, South Africa and increasingly recognized in Malaysia (Norizan et al, 2014). In Malaysia, property development is a significant contribution to the construction industry where clients or

buyers invest large sums of money in the hope that the investments will be worthwhile and yield good economic returns. Clients start to realize the importance of quality and so will force developer to deliver better quality end products which can give them full satisfaction (Norizan et al, 2014; HBA, 2009). So it is the intention of this paper to examine the practice adopted by different developers in adopting CONQUAS or QLASSIC assessment in their projects and relate that to Customer Satisfaction of the house owners. As Iskandar Malaysia is attributed as one of the flagship for the Economic Transformation Programme (ETP) region, we will focus our research to 2 developers within Iskandar Malaysia UEM Sunrise and IOI properties to be the subject of our research.

UEM Sunrise being the master developer for Nusajaya, target for the premier quality products in its housing projects. Being the master developer for Nusajaya, UEM Sunrise aims to be developed into a regional city that creates and promote economic growth and development in line with the Government's plans under the Economic Transformation Programme (ETP). In order to achieve that milestone, UEM Sunrise Berhad, as a property developer employs various management programme to ensure superior quality in all aspects of our projects, from the materials used to labour workmanship.

One of the programme subscribe by UEM Sunrise in delivering quality products to the purchaser was on CONQUAS (Construction Quality Assessment by developed by Building Construction Authority (BCA) of Singapore and Quality Assessment in Construction (QLASSIC) developed by Construction Industry Development Berhad (CIDB) Malaysia. This assessment will allow for target setting and ensure contractors to meet certain workmanship standards in the quality of finishing work for the developments. The ultimate aim of improving the quality standards in their development is in order to give assurance to their house buyers that they will be guaranteed of high quality products whenever they purchase their dream houses in UEM Sunrise projects

IOI Properties Group Berhad (“IOIPG”) listed among the Top 10 property developers in Malaysia and KLSE public-listed company. With its solid reputation as esteemed property arm for IOI Group. Today, IOIPG is recognized as one of the largest property companies in the country with more than three decades of proven track record. Developed and sustainable townships in sought-after regions such as in Klang Valley and Johor, locally while embarking on oversea property developments in Singapore and the People’s Republic of China, with more than of 10,000 acres of landbank.

As construction companies faced with increasing competition, greater attention continues to be placed on customer relationships and satisfied customers. As previous studies by Mohd Fauzi et al. (2012) suggest for relationship exist between occupants satisfaction and housing defects. Satisfaction lies within the occupants when the house defects are less and dissatisfaction when the houses are fully laden with defects. These finding advocate the previous findings established by Auchterlony (2009), Adrienne (2007) and Ozaki (2007) that the occupants satisfaction level has a relationship with their house condition. (Mohd Fauzi et al., 2012; Auchterlony, 2009; Adrienne, 2007; Ozaki, 2007).

It is also widely noticed that high customer satisfaction leads to relationship strength and a deep state of collaboration has been found profitable (Sami et.al 2012; Storbacka et al, 1994). Anderson et al. (1994) examine briefly the links between customer-based measures (customer satisfaction) of firm performance and traditional accounting measures of economic returns. Their findings emphasise that firms, which achieve high customer satisfaction also enjoy superior economic returns. That’s why measured of the customer satisfaction level put as one of the key emphasis in the corporate measurements when setting the company Key Performance Indicators (KPI’s).

Since the customer satisfaction and quality defects are closely related, it is the correct time for this research to be conducted to establish if the past research finding did apply to UEM Sunrise or IOI Property scenarios i.e.: through the implementation of CONQUAS / QCLASSIC program to reduce defects will directly impact on the customer satisfaction level of the purchasers.

1.2 Problem Statement

UEM Sunrise Berhad is a property development arm for UEM Group, a Government Linked Company which was established with the aim to become a competitive conglomerate at the international level. It is hoped to transform into a similar company such as Temasik Holding and Keppel Land for the government if Singapore in the period of 10 years' time. To reach to that stature, program on raising the construction workmanship quality has been introduced in UEM Sunrise to beef up the quality expectation on the houses delivered to purchasers. One way, in which the how this is monitored is through the monitoring on the CONQUAS achievements inside the Key Performance Indicator (KPI's) for the Development projects. Since its inception in 2012, the key target for the CONQUAS KPI's has been raised year over year to reflect on raising the bar of quality achievements for all the projects within UEM Sunrise. This is reflected happening as the actual average year over years score is improving

While for IOI Properties, as a socially-responsible property developer, IOIPG's commercial buildings are designed to meet the Green Building Index ("GBI") or are Green Mark-certified. It adopts the ISO 9001:2008 standards for its property developments and all ongoing projects are built to achieve a Quality Assessment System in Construction ("QCLASSIC") score of not less than 75%. A strong testament to its quality excellence, IOIPG is consistently ranked among the top developers in Asia and bestowed numerous accolades by leading publications and organisations such

as FIABCI, BCI Asia, The Edge Malaysia, Asia Pacific Property Awards, and the Building and Construction Authority (“BCA”) in Singapore.

However, despite the achieved result on external assessment or quality commitment statement in the organization vision, the rate of customer complaints due to poor workmanship issue due to building defects are still at the alarming rate. Despite the improvement in the CONQUAS / QLASSIC score, which means that the number of defects will be reducing, whether that will translate into the satisfied house owner is still questionable.

1.2.1 Why need to compare between CONQUAS and QLASSIC

QLASSIC as a brand inside Malaysia RMK 11 CITP programme

In order to transform construction industry, Construction Industry Transformation Programme (CITP) has been launched by the Prime Minister on 10 September 2015. The primary objective was to transform construction industry to become highly productive, environment sustainable, with globally competitive players and focus on safety and quality standards. Out of the 4 main thrusts, Quality focus falls under Quality, Safety and Professionalism ingrained in construction industry culture. The expected outcome of this thrust will be to increase the number of projects undertake QLASSIC assessment with more than 50% public projects exceed minimum acceptable score on QLASSIC. According to study made by CIDB, currently, only 3% adopt QLASSIC assessment for their project. Hence, with the increasing importance for QLASSIC to play in Malaysian Economic Plan (RMK11), CIDB has to play aggressive plan to promote adoption of QLASSIC in project. This will also mean for QLASSIC standards need to be at the forefront to show positive image of CIDB as effective tools to be adopted for Quality Assurance. Previous study by Norizan, quoted saying that developers still keen to adopt CONQUAS rather than QLASSIC due to the

lack of awareness and confidence among developers. In contrast, CONQUAS is more widely recognized and accepted by developers as well as contractors in the country (HBA, 2009). Hence, this study is meant to provide another dimensions in term of property owners satisfaction and perceived value when comes to 2 different types of assessment. Just like a national car of Proton brand, CIDB also is looking towards QLASSIC as a national standard brand for construction workmanship assessment which carry CIDB name with it, to be used for any construction projects in Malaysia. Hence, this study will address how satisfied are the purchasers on quality attributes specified inside QLASSIC to CONQUAS elements.

1.3 Research Questions

Even though the company has invested millions of dollars to ensure compliance to CONQUAS / QLASSIC standards over the years through training, seminar or benchmarking exercise, which does not necessarily translate to the end users to be satisfied when the products were handover to the purchasers.

The above argument, bring us to the following research questions:

- a) Is there any difference in the customer satisfaction level for CONQUAS and QLASSIC certified housing projects?
- b) Is there any difference in the perceived value for CONQUAS and QLASSIC certified housing projects?
- c) To investigate if there is any relationship between the customer satisfaction and perceived value in CONQUAS / QLASSIC certified housing project?

1.4 Research Objective

The research objectives are described as follows:

- a) To determine if there is any difference in the Customer Satisfaction level for housing projects after completed CONQUAS assessment comparing it against the project after completed QLASSIC assessment.
- b) To determine if there is any difference in the Perceived Value for housing projects after completed CONQUAS assessment comparing it against the project completed QLASSIC assessment.
- c) To investigate if there is any relationship between Customer Satisfaction and Perceived Value for projects after completed CONQUAS / QLASSIC assessment.

1.5 Significance of study

1.5.1 Academic / Theory

From the academic standpoint, this study is to establish whether there is any significant impact whenever developer applied for the CONQUAS / QLASSIC assessment to the customer satisfaction level. As of now, very limited research in the market did study about CONQUAS and QLASSIC impact to customer satisfaction and interrelationship, so this will open up the avenue for future research being develop in the similar nature.

1.5.2 Practical / Organization

From the organization standpoint, this study will help the organization to determine the relationship of engaging the recognized standard of assessment such as CONQUAS/QLASSIC towards the overall customer satisfaction level.

Besides the 3rd party results obtained from the BCA or CIDB assessment, this study will relate those critical element in the CONQUAS or QLASSIC standard assessment to fulfilment of purchasers' expectation through the measure of customer satisfaction

From the organizational standpoint, a lot of investment (ie training/assessment fees) has been made in order to regulate all the projects to adopt the CONQUAS assessment exercise. CONQUAS standard is a stringent assessment system that gauges the quality of construction workmanship, so the construction cost for any project undergoing the CONQUAS assessment will be slightly higher. There are additional costs in term of materials, plant and labour. The cost of supporting a third party (the assessor's team) process also contributes to extra cost for the client. Previous finding indicates that there is added cost of between 10% and 15% for CONQUAS application projects (Norizan et. al., 2014). Though CONQUAS and QLASSIC have varied amount of investment associated with it no previous study have addressed or compare the effectiveness of both standards in meeting overall customer satisfaction.

1.5.2.1 Cost comparison between CONQUAS and QLASSIC

With the existent of the 2 standards in the construction industry, ie CONQUAS and QLASSIC, there is no studies of preferences by the developers whether to engage CONQUAS or QLASSIC in its projects. However, as shown provided example in this study, IOI Property prefer to engage QLASSIC for assessment of their project while

UEM Sunrise tend to have CONQUAS for its project. There has been no real reasoning on why this trend exist. However, when cost comparison is used for the implementation of the 2 standards, it can be seen as per below table.

Standard cost	CONQUAS	QLASSIC
Training fee	S\$ 8,500 (RM 21,250)	RM 5000
Assessment fee	S\$ 20,000 (RM 50,000)	RM 500
Total	S\$ 28,500 (RM 71,250)	RM 5,500

Table 1.1: Estimated cost comparison for implementation between CONQUAS and QLASSIC

From the above table, it can be seen, the standard cost for implementation on CONQUAS is multiple times higher than the cost to implement QLASSIC assessment. Then, with higher fees imposed when CONQUAS standards implementation, does that reflect on higher customer satisfaction when comes to quality of the houses delivered is yet to be studied. Then, how will the customer satisfaction measurement will translate into the better appreciation value for the property own. This is what this research paper is trying to address.

1.6 Scope of Study

This study focuses on the result of the customer satisfaction survey after the assessment of the CONQUAS/QLASSIC assessment for developments within Iskandar Malaysia region.

For study on the post CONQUAS assessments, 2 developments will be used for in this research namely project East Ledang 4B1 and East Ledang 4B2. The BCA assessment for both of this phases conducted on 9 and 10 September 2015 with the achieved score of 73.1% and 75.4% respectively.

For study on the post QLASSIC assessments, 2 developments will be used for this research namely project Zon 6B03, Parcel 4, Bandar Putra and Phase 3A, Taman Kempas Utama. QLASSIC assessment for Parcel 4 was conducted on 8 April 2015 while Phase 3A was conducted on 6 August 2015. Results for QLASSIC assessment not reveal as CIDB did not have result posted in website like BCA did for CONQUAS.

1.7 Thesis Outline

In carrying out this research, right methodology is required to enable the compilation of data and information from various sources. Few stages are involved which are literature review, collection of data, data analysis and lastly conclusion and recommendation.

This research was divided into five chapters. The first chapter (Chapter 1) explained the problem statement, aim and objectives, scope of study and brief methodology that will be used throughout the study.

The second chapter (Chapter 2) elaborates on the history on customer satisfaction theories, CONQUAS /QLASSIC standard requirements and perceived value theories.

The third chapter (Chapter 3) elaborates on the methodology used throughout the study together with the structure and description of the questionnaire survey. The questionnaire will collect data on demographic background of all respondents as well as their feedback on the system developed.

The fourth chapter (Chapter 4) elaborates on the data collected by survey questionnaires by using SPSS software to determine the reliability of the data gathered earlier with the intention that no bias or errors free data.

The final chapter (Chapter 5) concludes the overall research and suggests recommendation for future research.

1.8 Operational Definition

- a) Customer Satisfaction – measuring how satisfied the home owners are with the quality level of workmanship when they received the keys during handover of their properties. The level of customer satisfaction is a variable of loyalty and re-purchase intentions for new properties, and in long term will be key to securing customer loyalty and generating long term financial performance.

- b) Perceived Value - perceived value can therefore be defined as the difference between the benefits and the sacrifices in terms of their expectations i.e. needs and wants. Customer sacrifices are the overall monetary and non-monetary costs the customer invest to maintain a continuous relationship with the property seller.

- c) CONQUAS – Construction Quality Assessment is a standard assessment on residential / commercial building developed and implemented by Building Construction Authority (BCA Singapore).

- d) QCLASSIC – Quality Assessment in Construction is a standard assessment on residential / commercial building developed and implemented by Construction Industry Development Board (CIDB) Malaysia.

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