Housing Affordability Challenges: the Case of the Median Income Households in Cagayan de Oro City Philippines

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Abstract

Like most urban areas in the Philippines, good quality housing in Cagayan de Oro City is expensive. The affordability issues faced by median income group in the city had prompted this research. The median income employees chosen as respondents to the survey of this study all come from a local university in the city. The main objective of this study is to investigate housing affordability among these middle-income earners. The results highlight the importance of the demographic and socio-economic backgrounds of households that influence housing adequacy and affordability. However, for most of the respondents who demand housing, income is still the major limitation in meeting the housing adequacy and affordability requirements. This paper contends that if affordability in housing is to be properly and adequately addressed in the city, there is need for policy initiatives and interventions to assist the median income earners as well as incorporate social housing as a priority development policy.

Keywords: Housing affordability, urban development, housing finance

Rationale

Housing is a basic need and forms part of the critical human rights. Studies have shown that the problem of housing is universal. However, this is more serious in developing countries in Africa and Asia, wherein most cities now account for over 90 percent of the world's urban population growth. The need to ensure adequate housing thus constitutes one of the critical challenges facing development, especially in urban areas (UN Habitat, 2007).

In the Philippines, Cagayan de Oro City is one of the emerging growth centers. One of the challenges that come with this is the provision of adequate housing and basic services. Like most urban areas in the country, good quality housing is expensive. Most of it cannot be built without mortgage finance. Middle-income and even high income households need mortgages in order to buy it, or attain long-term loans in order to build it. The affordability issues faced by this income group have prompted this research. This requires a better understanding of the socio-economic characteristics and needs of this group. This paper is part of the initiative in accomplishing that goal. It tries to provide a general situationnaire of the current housing conditions of selected full-time employees in City. In particular, these employees all come from a local university in the city. These employees are a good representative of the median income earners in the city. In so doing, it outlines the evidences that might inform decisions about a range of policy responses to housing need, including, setting targets for affordable housing and allocations programs.

Objectives of the Study

The main objective of this study is to investigate housing affordability among middle-income earners in the city. Specifically, it looked into the socioeconomic status of the employees; determined the number of employees that need affordable housing; and assessed whether the housing requirements can be sufficiently met by the employees.

Related Literature

To be able to determine the challenges of affordable housing, three basic concepts require clarification and elaboration. These are housing demand factors, adequacy, and affordability. The overseas studies that were reviewed focused on the countries' experience and the different measures considered by organizations, commonly local councils, in order to meet their specific responsibilities around housing provision and land use planning in their jurisdictions.

Drivers of Housing Demand

Housing demand has been studied for at least thirty years. The early model used to estimate housing demand was that of Neoclassical Consumer theory, which was later found to be imperfect due to the unique features of housing such as durability, heterogeneity and spatial fixity as contented by Megbolugbe et al (1991). Currently, housing demand literature is dominated by two major factors: socio-demographic and economic. Often the local situationnaire and the key socio-economic characteristics of residents define the housing market. In most cases, key socio-demographic factors underpinning the housing market are population size, age, sex, civil status, household and family composition.

An explanation of the relationship between demographic and economic factors on housing-consumption decisions is found in the Canadian Housing Observer (2003). It stipulated that housing market activity is strongly influenced by demographic and socio-economic trends. Both the growth of the population and its characteristics influence the rate of household formation which, in turn, is a key driver of housing demand. While rapidly growing populations tend to generate more housing demand than slow-growing populations, housing needs and preferences are also shaped by the characteristics of the individuals in the population, particularly by their age and family status. Additionally, Velilla and Olympia (2002) noted that, the bigger the family size, the better educated the person is and the permanency of the job the person has further incentive to own a house. Demographic changes are not the whole story, however, for in order to act on their preferences, people must have sufficient financial resources — either income or wealth or a combination of the two.

Theoretically, buying a residential unit is also based on economic factors. Past and current studies often consider demand for different housing in terms of price and affordability factors. According to Rossi (1955), the most important factors influencing housing demand are price, location and population's socio-economic environment. Lowry in 1974 put forward a descriptive study that explained the demand of a residential unit from the aspect of income, number of household, occupation and transportation cost. Rosen (1974) considered income, age of a family leader, gender, number of household, and education as factors influencing the demand for a residential unit.

The relationship between economic factors and housing demand has become more important. Many countries have a capitalist economic system whereby supply and demand of any good are determined by market forces. In this circumstance, the influence of economic factors, such as household income, housing prices, required repayments on housing loans, and interest rates, play a significant role in determining housing demand (Ellis, 2003).

Housing Adequacy

The International Covenant on Economic, Social and Cultural Rights (ICESCR) provides the most significant legal source of the right to adequate housing. Article 11 recognizes the right of everyone to an adequate standard of living for himself and his family, including adequate clothing and housing, and to the continuous improvement of living conditions.

The most authoritative legal interpretation of the right to housing was produced as a General Comment in 1991 by the United Nations Committee on Economic, Cultural and Social Rights (UN ICECSR) and provides a standard for assessing the performance of Governments in the provision of this right. ICESCR requires states to use all appropriate means, including legislative, administrative, judicial, economic, social and educational measures, as steps to ensure the realisation of the right.

Specific requirements for housing in turn are highlighted by both the Commission on Human Settlements and the *Global Strategy for Shelter to the Year 2000*. These are: adequate privacy, space, lighting and ventilation, basic infrastructure and location with regard to work and basic facilities, all at reasonable cost.

The notion of adequacy differs from country to country (Craven, 1995) but the right to adequate housing should not be interpreted in a narrow sense as merely having a roof over one's head. Adequate housing implies the right to live somewhere in security, peace and dignity. Certain elements need to be taken into account at all times, according to the UN CECSR. These are: security of tenure; for example, legal protection from eviction; availability of services, for example, sustainable access to water, sanitation and emergency services; affordability, ie., housing costs as a ratio of income; habitability which refers to the soundness of physical structure, dampness, and crowding; accessibility by all ethnic, racial, national minority or other social groups; location in relation to employment and schools and cultural adequacy, taking into account traditional housing patterns.

The Handbook on Good Building Design and Construction in the Philippines (2008), adopted from the Housing and Land Use Regulatory Board (HLURB) and Presidential Decree Nos. 957, 1216, 1344 defines housing adequacy in terms of meeting the cultural, social, and physical requirements of the residents and provision of safe dwelling free from hazards.

Housing Affordability

Housing affordability has been referred to by a number of researchers in many different ways. According to Milligan, et al (2004), affordable housing recognizes the needs of households whose incomes are not sufficient to allow them to access appropriate housing in the market without assistance. Thus, the term 'affordable housing' describes housing that assists lower income households in obtaining and paying for appropriate housing without experiencing undue financial hardship. In recent years, the term 'affordable housing' has been used as an alternative to terms such as 'public', 'social' or 'low cost' housing (Gabriel et al 2005).

Another aspect of affordability is the ability of a person in providing something, which is usually referred to as his ability in financial terms. To Anirban et.al, (2006) house affordability is a condition when people have the potential to save certain portion of their income to buy a house, as well as to pay other expenditures in their working period.

In most studies, housing affordability is measured relative to household income and expenditures. Bujang, 2006 and United States Department of Housing and Urban Development (HUD, 2002) noted that, families who pay more than 30 percent of their income for housing are considered cost-burdened and may have difficulty to meet basic necessities such as food, clothing, transportation, and medical care. Globally, financial institutions have applied the rule of not allowing households to take out home loans requiring more than 30 per cent of gross income for their servicing.

Gabriel, et. al. (2005) provides a rationale for the use of the 30/40 affordability rule because it provides continuity with traditionally used measures and because it is simple to apply and easy to understand. A case is also made for providing additional complementary indicators that are more responsive to household needs and capacity to pay.

Housing affordability can also be viewed in three different ways: purchase affordability, repayment affordability, and income affordability (Quan and Hill, 2008). Purchase affordability is relevant in considering whether a household is able to borrow enough funds to purchase a house. Repayment affordability is concerned with the burden on the household to pay the mortgage, and income affordability is referred to the measurement of the ratio of house prices to the income of the purchaser.

Methodology

A total of 101 respondents were chosen in this study. The selected respondents all come from the local university in Cagayan de Oro City. This is due to convenience, budget limitation and time span of the study. Sampling procedure used was stratified random sampling by cluster. Sampling size was determined based on the total population of all full-time employees. Data gathering techniques included survey, interview with key informants, secondary data through HR personnel data and government issued data.

Frequencies, percentages and means were used in the discussion of the results. Cross tabulations were also incorporated to describe the situationnaire more meaningfully. Analyses were done in two levels. First, the analysis covered assessment of adequacy of the housing conditions of the employees. The term adequate housing refers to housing that meets the requirements of: security of tenure; habitability in terms of the soundness of physical structure; availability of services such as access to water, sanitation and electricity; and affordability.

Adequate housing does not require any major repairs. Adequate housing also means enough bedrooms for the size and make-up of resident households.

Second, housing affordability was measured in terms of the "residual measure" or "living standards measure". This measure is sensitive to the impact of housing costs on the capacity of households to meet essential non-housing costs. This is a measure of the income remaining after housing costs are met and considers whether housing is affordable in the context of income levels and broader basic household needs. In other words, the residual measure is specifically concerned with the relationship between housing costs and living standards, which themselves may be determined normatively or relatively (Burke and Ralston, 2003). For this purpose the assumption of affordability ratio requiring 30 per cent of before tax household income is applied. For renters, shelter costs include rent and any payments for electricity, fuel, water and other municipal services. For owners, shelter costs include mortgage payments (principal and interest), property taxes, and any other fees, along with payments for electricity, fuel, water and other municipal services. This is the standard used globally by financial institutions, when a household would have to spend 30 per cent or more of its before-tax income to pay the median rent of alternative local market housing that meets all three standards.

Simple descriptive statistical tools, namely, tables were used to present the data where appropriate. Results of the analysis are presented in subsequent sections of this paper.

Results

1. Socio-economic Status of Employees and Their Housing Situationnaire

1.1 Employment Profile

A total of 101 full-time regular and probationary employees were surveyed. There were fifty tertiary faculty and fifty-one non-teaching employees.

In terms of length of service, most of the respondents are relatively new to the university, whereby 40 % of them served the university between one to four years. This was followed by 24% of employees who served the university between five to ten years. Closely following suit are employees who have been in service between eleven to twenty years. Lastly, employees with twenty one to thirty five years of service comprise of only 15 %.

As regard to the position of the employees, 48 % are classified as administrative staff, 42 % are ranked as instructors, 5 % are professors and 6 % were classified middle managers, i.e., Chairpersons, Deans, and Directors.

Employees in the university are predominantly college graduates at around 82 %. Of these employees more than 50 % are graduate and postgraduate degree holders. A minority of 14 % attained basic education and 4 % hold vocational certification.

1.2 Demographic Profile

The largest group of respondents belongs to the youngest age, ranging between twenty to thirty years old. They comprise about 40 % of the total. This was followed by 27 % of employees belonging to the age group thirty one to forty. Correspondingly, middle age employees aging from forty one to fifty comprise 21 % while senior employees from fifty one to sixty are only 15 percent of the total.

Gender wise, 58 % are female while 42 % are male. More than half of the respondents are married, comprising 61 % of the total while single employees constitute 36 %. A minority are widowed and/or separated at 3 %.

Family size measured in terms of number of children is presented in the table below. Forty two percent of the respondents don't have children. Considering that 61 % of the respondents are married, this implies that there are married employees which don't have children at the time of the survey, which comprise 14 % of the total. Married employees with children ranging from one to three comprise 41% of the total. A number have four to six children and there are 14 % of them. Lastly, 4 % of the employees have kids between 7 to 9.

1.3 Economic Profile

Economic profile of the respondents was represented by the respondents' monthly salary, and respondents' household financial status.

1.3.1 Respondents' Monthly Salary

Thirty one percent of the employees surveyed receive salary between ₱ 10,001 – ₱ 15,000. This was followed by 25 % of employees receiving less than ₱ 10,000.

Third group belongs to the 20 % whose salary is between ₱ 15,001 – ₱ 20,000. Closely following them are employees with salary between ₱ 20,001 – ₱ 25,000, comprising of 17 % of the total. Only a few, at 8 % receive more than ₱ 25,000.

Forty one percent of the single employees receive salary between ₱ 10,001 – ₱ 15,000 and 31 % receive less than ₱ 10,000. The rest of the 28 % receive more than ₱ 15,000. Only one of the single employees has a child. Among the married employees, 30 % percent those who have one to three children receive more than ₱ 20,000, 26 % receive between of ₱ 15,001 – ₱ 20,000. Interestingly, the number of children tends to be the same even for those who receive salary less than ₱ 15,000. This might be partially explained by the fact that all these employees, regardless of salary brackets enjoy the same benefits for grant in aid for children.

Table 1.3.1 Number of Children Relative to Respondents' Monthly Salary

	Number of Children									
Respondents' Monthly Salary	**None**		**1-3**		**4-6**		**7-9**		**Total**	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
₱ 10,000 and below	12	28.5	10	24.4	2	14.3	1	25.0	**25**	**24.7**
₱ 10,001 – ₱ 15,000	18	42.9	10	24.4	2	14.3	1	25.0	**31**	**30.7**
₱ 15,001 – ₱ 20,000	6	14.3	9	22.0	4	28.6	1	25.0	**20**	**19.8**
₱ 20,001 – ₱ 25,000	4	9.5	7	17.0	5	35.7	1	25.0	**17**	**16.8**
₱ 25,001 – ₱ 30,000	1	2.4	3	7.3	0	0.0	0	0.0	**4**	**4.0**
₱ 30,001 and above	1	2.4	2	4.9	1	7.1	0	0.0	**4**	**4.0**
Total	**42**	**100.0**	**41**	**100.0**	**14**	**100.0**	**4**	**100.0**	**101**	**100.0**

1.3.2 Household Financial Status

Fifty five percent of the employees surveyed are living with immediate family only. Very common among Filipino families is the extended family, whereby, the members of the household extend beyond the immediate family of parents and their children. This extended family lives together as a single household. Among the employees surveyed, 28 % belong to this category. Single employees commonly stay with their parents, relatives or live in rented spaces.

Given a family structure, one can expect that there will be several members of a household who will contribute to the household income. Among the employees surveyed, 66 % claimed that there are about 2-5 family members who contribute to household income while 27 percent of the respondents are the sole income receiver in the household.

Household income is measured in terms of the combined incomes of all the members of the respondents' household. It includes every form of income, e.g., salaries and wages, retirement income, etc. Household income can be used as an indicator for the monetary well-being of a of the respondents' household. Among the respondents, 40% claimed that total monthly household income is less than ₱20,000. Approximately the same proportion has a total monthly household income of ₱21,000 – ₱40,000. Eleven percent has total monthly household income of ₱41,000 – ₱60,000 while the rest of the 9 % has total monthly household income of over ₱60,000.

Household consumption expenditure consists of the expenditure incurred by the respondents' household on consumption goods and services. Thirty five percent of the respondents claimed they spend between ₱10,000 – ₱20,000 on consumption goods and services. A close 31 % cited that on consumption goods and services is less than ₱10,000 monthly. The third group or 17 % of the respondents answered they spend between ₱20,000 – ₱30,000.

Monthly net income was also estimated for all the respondents. This is determined by getting the difference between the respondents' household income and expenditures. The results revealed that 56 % incur less than ₱10,000 for their household monthly net income. Around 23 percent incur ₱10,000 – ₱20,000 for their household monthly net income and 10 % of the respondents have over ₱20,000. Unfortunately, 7 % of the total respondents incur dissavings.

1.4 Housing History and Profile

1.4.1 Housing History

Thirty seven percent of the respondents enjoy living for free in their current dwelling at the time of the survey. Twenty seven percent are legal home owners, 19 % are paying for housing mortgage and 18 % are renting. The survey also revealed that respondents who owned or mortgaged their houses have acquired their houses either through inheritance, personal savings or housing loan from a government institution. Sixty seven percent of these respondents cited that the houses were acquired through personal savings while 33 % percent availed them through housing loan.

Fifty one percent of the respondents claimed that they been living in their current dwelling between five to ten years. Thirty four percent has lived there between eleven to twenty years. Eleven percent has lived in their current dwelling more than twenty years. The number of household members living in the respondents' dwelling coincided with the respondents' family structures. In effect, those with immediate family members only are also the highest at 57 %. While those with extended family or household with six to ten members are at 33 %.

2. Employees in Need of Adequate Housing

One primary concern when it comes to owning a house is adequacy requirement. As cited, certain elements need to be taken into account at all times, according to the UN Committee (UN CECSR, 1991). For this study, the researcher chose the following: security of tenure which implies legal protection from eviction; habitability in terms of the soundness of physical structure and number of occupants and the availability of services such access to water, sanitation and energy.

2.1 Security of Tenure

Based on the International Covenants on Human Rights (the International Covenant on Civil and Political Rights and International Covenant on Economic, Social and Cultural Rights), security of tenure refers to the right of access to and use of land and property underwritten by a known set of rules, and that this right is justifiable. In practice, households having secure tenure rights are protected from involuntary removal from their land or residence. Evictions could happen only in exceptional circumstances by means of known and agreed legal procedure, which must be objective, equally applicable, contestable and independent. Exceptional circumstances would include situations where physical safety of life and property is threatened, or where the people have taken occupation of the property by force or intimidation, or kept occupying the property without fulfilling their parts of the contractual agreements with landlords.

Based on the data in Table 14, 37 % of the respondents enjoy living for free in terms of home tenurial arrangement, 28 % are home owners, 19 % are paying for housing mortgage and 18 % are renting. Using the definition above, only 55 % of the employees surveyed have security of tenure. This leaves 45 % of the respondents not secured. This is because the 37 % who are living for free does not automatically translate to legal protection in terms of tenure.

2.2 Housing Habitability

As described in the literature, the adequate housing requirements would only be met if the respondents also have habitable housing in terms of the soundness of physical structure which meets basic living and safety standards. Thirty nine percent of the respondents live in dwelling described as "strong". This description refers to a dwelling with galvanized iron sheets/tiled roofing; hardwood/concrete foundation, columns, beam, walls and flooring; complete finishing and tilings. Twenty eight percent have dwellings considered as "mixed but predominantly strong", i.e., more than fifty percent of the structure is made up of strong materials. These two classifications meet the habitability requirement of adequate housing. This means that the remaining 33 % of the respondents have insufficiently met this criterion. The majority of employees who are unable to meet the habitability condition are sixteen staff who are tenured employees.

Table 2.2.1: Type of Employment and House Typology

Type of Employment	Strong		Light		Mixed but Predominantly Strong		Mixed but Predominantly Light		Mixed But Predominantly Makeshift		Semi Finished but Predominantly Strong		Semi Finished but Predominantly Light		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
faculty, full-time substitute	3	8	0	0	5	18	0	0	0	0	1	13	0	0	9	9
faculty, full-time on probation	5	13	0	0	3	11	0	0	0	0	2	25	0	0	10	10
faculty, full-time regular	17	44	0	0	9	32	4	31	0	0	1	13	0	0	31	31
staff, on probation	8	21	6	86	3	11	3	23	3	60	3	38	1	100	27	27
staff, regular	6	15	1	14	8	29	6	46	2	40	1	13	0	0	24	24
Total	39	100	7	100	28	100	13	100	5	100	8	100	1	100	101	100

The habitability condition also requires that the number of rooms in the house should be proportionate to the number of dwellers in the house. Only a minority at 5 % of the respondents failed to meet this condition.

Table 2.2.2 Number of Rooms and Family Structure

Number of Rooms	**Extended Family/Joint Family**		**Immediate Family**		**Single/Singles Sharing/Staying with a relative/Friend**		**Other**		**Total**	
	No.	%	No.	%	No.	%	No.	%	No.	%
Zero	3	11	1	2	1	8	0	0	5	5
1-4	21	75	50	91	9	75	3	50	83	82
5-8	4	14	3	5	1	8	3	50	11	11
8-12	0	0	1	2	1	8	0	0	2	2
Total	28	100	55	100	12	100	6	100	101	100

2.3 Availability of Services

Utilities within the house are also required elements for housing adequacy, such as kitchen, toilet and bath, access to water and electricity. Most of the respondents adequately met this criterion, with 88 % connected to water line and 97 % with legitimate electricity connection.

Table 2.3 House Amenities and Utilities

Amenities and Utilities	Number	Percent
House with Separate Kitchen	81	80.2
House with Toilet/Bathroom inside	87	86.1
Sources of Water		
Government or private water line connection	89	88.0
Water tank or well connection	4	4.0
Local water line (no connection)	3	3.0
Purchased source (bottled water)	3	3.0
Local water tank, well , or truck (no connection)	2	2.0
Sources of Electricity		
Formal power line connection	98	97.0
Informal power line	3	3.0

3. Housing Demand and Affordability

3.2 Characteristics of Respondents with Housing Demand

Among the respondents, 63 confirmed that they are planning to build a new house in the next five years. Based on family structure, the demanders are primarily those who are living with their immediate family. This is followed by respondents who are currently living with extended family and six respondents classified as single who are currently living with relatives or friends.

Table 3.2.1 Responses to Demand for Land/New Building for House Construction Crosstabs with Type of Family Structure

	Extended family/Joint family		Immediate family		Singles/Singles Sharing/Staying with a Relative/Friend	
Demand for land/new building for house construction	**No.**	**%**	**No.**	**%**	**No.**	**%**
Land and House acquisition for the next 5 years	11	68.8	25	73.5	6	85.7
House renovation for the next 5 years	11	100.0	24	96.0	6	100.0
New house construction for the next 5 years	9	75.0	6	28.5	2	40.0

Interestingly, 30 respondents who demand new housing don't have children. This may be due to the fact that housing affordability is largely dependent on a person's net income. Those without children usually incur lower expenses and therefore relatively higher net income.

In terms of respondents' monthly salary, majority of the respondents receive between 10,000-15,000. This is followed by respondents who receive between 10,000 and below.

Table 3.2.2 Responses to Demand for Land/New Building for House Construction Crosstabs with Respondent's Monthly Salary Range

Demand for land/new building for house construction	**P 10,000 and below**		**P 10,001-P 15,000**		**P 15,001-P 20,000**		**P 20,001-P 25,000**		**P 25,001-P 30,000**		**30,001 and above**	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Land and House acquisition for the next 5 years	13	76	20	80	5	71	5	71	1	50	1	33
House renovation for the next 5 years	12	92	20	100	5	100	5	100	1	100	1	100
New house construction for the next 5 years	2	25	4	67	7	54	5	50	0	0	0	0

3.3 Housing Affordability among Demanders

Affordability is the ability of a person in providing something, which is usually referred to as his ability in financial terms. To Anirban et.al, (2006) house affordability is a condition when people have the potential to save certain portion of their income to buy a house, as well as to pay other expenditures in their working period.

Housing affordability is measured by household income and expenditures. Thus, if a buyer allocates 30 percent of his or her gross monthly household income for buying a house, it can be said that he affords it. Bujang, 2006 and United States Department of Housing and Urban Development (HUD, 2002) noted that, families who pay more than 30 percent of their income for housing are considered cost-burdened and may have difficulty to meet basic necessities such as food, clothing, transportation, education costs of children and medical care. Financial institutions have applied the rule of not allowing households to take out home loans requiring more than 30 per cent of gross income for their servicing.

According to a Key informant, a project engineer who works in a construction company, the 30 % income ratio can be rationalized further by the fact that homeowners do incur life cycle cost of attaining and maintaining a housing property.

Life cycle costs are defined as the total cost of a property over the period of financial interest of the owner. This period will vary in length according to the circumstances of the owner and the nature of the investment (Fuller, 2010). The life-costs of a property are categorized as follows:

Capital Costs. In the Philippines, capital Costs include all costs associated with the initial acquisition of a property including land/property purchase price and design/construction costs. The land/purchase price of land or an existing home is usually readily identifiable. Design/construction costs are applicable for the construction of new dwellings and may include design fees, statutory authority fees and construction costs. However, additional allowances may be necessary for unforeseen expenses due to variations, provisional sum adjustments and other contingencies.

These costs should ideally be deducted from the purchaser's level of savings which may result in a reduced deposit from the amount envisaged and, hence, an increase in the purchaser's anticipated borrowing requirements. These costs generally comprise stamp duties, legal fees for the property's conveyance, survey/inspection fees, and services connection fees.

Finance Costs. Finance costs in the Philippines usually involve establishment costs and repayments. Establishment costs include fees charged by the lending authority, legal fees for the preparation and registration of the mortgage, and stamp duty. Mortgage repayments normally represent the most significant home ownership outlay during the early years of purchase and, as a consequence, are generally acknowledged as the most important affordability determinant. Repayments are determined by the amount borrowed, the interest rate on the loan and the loan structure. Interest rates have a significant effect on affordability levels and play an important role in the willingness and ability of individuals to purchase property.

Operating Costs. Operating Costs include annual ownership costs, maintenance, repairs and improvement costs. Annual ownership costs are classified as those costs which occur on a regular basis and generally include mortgage repayments (previously mentioned), local water rates, services charges, and realty taxes for titled property.

To have a more realistic estimate for respondent's affordability, the net income is derived. Net income is the difference of the respondent's total household income and total household expenditures. This method applies the residual measure which is specifically concerned with the relationship between housing costs and living standards. Based on this method, only five respondents among those who demand housing would qualify to the 30 % rule. In other words, majority of the thirty-nine respondents generates a net income less that 30% of their income and would be susceptible to "mortgage stress" Yi Tong (2004 in Gabriel et al, 2005).

Table 3.3.1 Net Income as a Percentage to Total Household Income

	All Respondents		House Demanders	
Net Income	No.	%	No.	%
Less than 30%	93	92	39	39
Equal to 30%	3	3	3	3
Above 30%	5	5	2	2
Total	101	100	44	44

The plan to buy or build a house is also a function of the buyer's willingness to pay for such project. The researcher compared this to the respondents' net income. The results showed that majority of the respondents' monthly willingness to pay are less than 10,000. This is consistent with the fact that the majority of them generate less than 10,000 monthly net incomes as well.

Table 3.3.2 Housing Demanders' Monthly Net Income and Monthly Willingness to Pay

	Monthly Net Income													
Monthly Willingness to Pay	**Dissavings**		**Zero**		**Less than P10,000**		**P10,000-P40,000**		**P40,000-P80,000**		**P80,000-P112,500**		**Total**	
	No	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**	**No**	**%**
Less than P10,000	3	100	1	100	24	96	8	80	1	100	0	0	37	89
P10,000-P20,000	0	0	0	0	0	0	1	10	0	0	1	50	2	5
No figure	0	0	0	0	3	4	1	10	0	0	1	50	5	7
Total	3	100	1	100	27	100	10	100	1	100	2	100	44	100

To further validate the ability of the respondents to finance the project, the researcher compared the affordability measure and the respondents' willingness to pay. Majority of the thirty-seven respondents have net incomes that fall below the 30% requirement. Also, their willingness to pay is below 10,000 pesos. Interestingly, there are five respondents who would be willing to pay from 10,000-20,000 even though their net incomes are less than 30 % of their monthly incomes. Altogether, only 2 respondents would qualify to both requirements.

Table 3.3.3 Housing Demanders' Percentage of Net Income to Monthly Income and Monthly Willingness to Pay

	Percentage of Net Income to Monthly Income									
Monthly Willingness to Pay	**Negative**		**0**		**Less than 30%**		**Above 30%**		**Total**	
	No	%	No	%	No	%	No	%	No	%
Less than P10,000	4	100	3	86	30	86	2	100	39	89
P10,000-P20,000	0	0	0	6	2	6	0	0	2	5
No figure	0	0	0	0	3	9	0	0	3	7
Total	4	100	3	100	35	100	2	100	44	100

3.4 Current Housing Need and Prices in Cagayan de Oro City

3.4.1 Housing Needs in Cagayan de Oro City

In 2009-2010, the Statistical Research and Training Center (SRTC), as the research and training arm of the Philippine Statistical System (PSS), in collaboration with Housing and Urban Development and Coordinating Council (HUDCC), conducted a research entitled "Housing Backlog Study" under the "Development of Shelter Monitoring Information System (DSMIS) Project." Table 1 shows the accumulated housing need estimates as of May 1, 2010 for Cagayan de Oro City.

The accumulated needs particularly refer to the number of household who do not have tenure and adequate housing condition. This can be explained by the fact that only a few can afford legal and quality housing in the city as attested from the results in the previous sections.

Table 3.4.1 Housing Needs Estimates by Housing Indicator in Cagayan de Oro City

ACCUMULATED NEEDS						
Year	Rent-free w/o consent of owners	Homeless (Other type of HUs)	Dilapidated/ Condemned	Marginal Housing	Doubled-up HHs in Acceptable HUs	Total
2010	8,681	13	811	1290	3,794	14,589
2011	8,845	13	827	1313	3,870	14,868
2012	9,012	14	843	1336	3,947	15,153
2013	9,183	14	860	1360	4,026	15,443
2014	9,356	14	877	1384	4,107	15,738
2015	9,533	15	894	1408	4,189	16,039

Source: NSO

Mortgage is the most common means of owning a house in the city. This is usually coursed through the Home Development Mutual Fund (HDMF) or popularly known as PAG-IBIG. The mortgage would normally require a down payment payable usually in one year period. This would constitute: reservation price, processing fee, moving-in fee and equity which is around 30 % of the total house and lost cost. Below is a cost estimate for housing projects in low cost subdivisions in Cagayan de Oro City as of December 2012 prices.

Table 3.4.2 Low Cost Housing Prices in Cagayan de Oro City, as of December 2012

House Type		Total Price	Total Downpayment (payable in 1 year)	PAG-IBIG MONTHLY AMORTIZATION					
ROW HOUSE				5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
Lot Area	50	450,000	68,600.00	8,007.97	4,715.10	3,650.30	3,140.60	2,852.10	2,673.10
Floor Area	28								
No. of bed rooms	1								
SINGLE DETACHED									
Lot Area	100	1,125,000	203,600.00	18,666.90	12,117.20	9,744.60	8,657.30	8,075.60	7,737.20
Floor Area	34								
No. of bed rooms	2								

The data above can also be a good approximation in determining whether the low cost housing can be availed by the respondents who plan to buy or build a house. This can be validated by looking at the respondents' planned housing budget and their monthly net income.

Table 3.4.3 Housing Demanders' Monthly Net Income and Planned Budget of the House

	Monthly Net Income													
Planned Budget of the House	Dissavings		Zero		Less than P10,000		P10,000-P40,000		P40,000-P80,000		P80,000-P112,500		Total	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Less than P500,000	1	33	0	0	9	36	2	20	0	0	0	0	12	27
Less than P1,000,000	0	0	0	0	7	28	2	20	0	0	0	0	9	20
P1,000,000-P4,000,000	2	67	1	100	6	24	3	30	1	100	2	100	15	34
No figure	0	0	0	0	5	12	2	20	0	0	0	0	7	16
Don't Know	0	0	0	0	0	0	1	10	0	0	0	0	1	2
Total	3	100	1	100	27	100	10	100	1	100	2	100	44	100

Based on the respondents' net monthly income and planned budget, only seventeen respondents would be able to afford a mortgage for a row house with only one bedroom in a low cost subdivision in the city on a mortgage basis for 15 to 30 years. Fourteen respondents have planned budget of over one million pesos. This budget would be sufficient for a single detached house with two bedrooms, but to afford it means they have to apply for a 20 to 30-year housing mortgage. Based on the monthly net income, only thirteen could potentially afford a single detached house with two bedrooms on a mortgage basis in a moderately priced subdivision in the city.

Alternatively, one may also opt to build his own house if one owns a lot. The total estimated cost for a 30 square meter house with two bedrooms and a toilet and bath would amount to PhP290, 618.00. Below are the details of the construction cost.

Table 3.4.5 Billing Summary of Materials and Estimated Cost

Materials And Other Requirements	Cost
General Requirements	10,000
Excavation/ Earthworks	8,600
Concrete Works	30,800
Masonry	29,470
Tie Wires And Reinforcement	28,000
Truss	44,765
Carpentry And Wood Works	42,404
Roofing And Bended Panels	24,752
Hardware	8,104
Plumbing	11,900
Electrical Works	10,640
Painting Works	24,500
Total Project Cost	273,935
Supervision Fee 3%	8218
Total	282,153
Overhead Contingencies Management	
OCM 3%	8465
OVERALL TOTAL	**290,618**

Conclusion

The results highlight the importance of studying the demographic and socio-economic backgrounds of the households that influence housing adequacy and affordability. Most important factor is household income. However, for most of the respondents in local university who demand housing, this factor poses to be a major limitation in meeting the housing adequacy and affordability requirements. The thirty seven percent of respondents that enjoy living for free in the current dwelling they are staying may continue to remain in that situation given the financial requirements of house ownership. Because of the inherent difficulties affecting housing costs and employees' capacity-to-pay, the need to secure or improve housing affordability is an enduring issue that housing project planners have to address.

The study presented the serious housing affordability challenges among median income households with particular reference to tenure for quality housing. This paper contends that if affordability in housing is to be properly and adequately addressed in the city, there is need for policy initiatives and interventions to assist the median income earners as well as incorporate social housing as a priority development policy.

Recommendations

In the study, demand for affordable housing continues to grow as a result of the demographic factors. However, home ownership and security of tenure, are a major challenge in view of the low incomes and limited access to home financing schemes. This situation is likely to become more restrictive in future years. Study of buildable lands and housing financing options, as well as other potential housing projects that could satisfy current unmet need should be considered.

One key to fulfilling a housing project is to consistently monitor the local housing market through data collection and survey. Constant tracking and dissemination of this information is essential to assist local developers, affordable housing providers, and policymakers in developing housing projects that address areas of greatest unmet need. Local housing developers would benefit greatly from consistent, accurate housing data. Another benefit of maintaining housing data is the opportunity to influence government housing agencies.

Additional financial resources are necessary to alleviate the stresses on the housing market. A number of potential homebuilders are not capable of developing fair-market single-family homes in an affordable range because of costs to develop in the local market.

An affordable housing trust fund should be considered by housing project planners as source of capital for the production and acquisition of mortgaged homes and associated supportive services. It can potentially provide funding without restriction that gives the community the ability to focus on most pressing housing needs, and could be used to leverage other funds for the production of more affordable housing.

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