



THE EFFECT OF IMPUTED RENT ON SALARIES & WAGES OF HOUSEHOLDS IN CANAMAN, CAMARINES SUR

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Abstract: Using data from the Community-Based Monitoring System, this paper investigates the income advantages derived from imputed rent and its impact on the total salaries and wages of the households in Canaman, Camarines Sur. The results indicate that the effects on salaries and wages are significantly dependent on the way imputed rent is estimated by the households. However, this paper disregarded any behavioral responses by the households in the Community-Based Monitoring System survey.

Key Words: *Imputed Rent, Salaries & Wages, Canaman, Camarines Sur*

1. INTRODUCTION

1.1 Background of the Study

Household income is no longer measured just by monetary means but also by in-kind or non-monetary components. Several literature already provided extensive analysis on the relevance of monetary income to households, however, non-monetary income did not receive similar interest primarily due to limited empirical data.

Imputed rent is one of the types of non-monetary income that gathered quantitative significance. In the latest version of the Household Profile Questionnaire of the Community-Based Monitoring System, it is one of the items being asked to a household respondent under housing section and added to the total household income. This is already in accordance to the 1977 recommendations of the United Nations when it issued a set of guidelines on Statistics of Distribution of Income, Consumption and Accumulation of Households. The guidelines recommended that imputed income from owner-occupied housing be included in the property income component of household income along with interest, dividends and rent receipts and that this, along with transfer and benefit income, be added to primary income to give the preferred measure of total household income (Yates, 1994). In a similar manner, it was also suggested that rental expenditure be imputed as an item under the household consumption.

There have been studies conducted on imputed rent after the recommendation of the United Nations to include it as part of the household income. Although most of these studies focused on the problems of measurability of imputed rent in different countries and its impact on income distribution, there were also studies founded on the effect of imputed rent on a macroeconomic level. In January 2002, Frick and Grabka came up with a study on the personal distribution of income and imputed rent for the German Institute for Economic Research. In that paper, they first analyzed the absolute and relative relevance of imputed rent



as measured in the respective panel data sets in contrast to a reference model where imputed rent is set to zero.

There are also studies conducted in Australia, using the Household Expenditure Survey (HES), which showed that net imputed rent increases total household income of homeowners by 10% (Yates, 1994). After including imputed rents, income inequality declines slightly. However, the income advantage is not distributed equally among all homeowners. Those owners who have attained complete ownership of their homes profit greatly from imputed rents, while the income advantage for homeowners still paying interest is relatively small (Frick & Grabka, 2002). Moreover, there were recommendations that net imputed rents should be studied relative to the income of individuals in a given households.

1.2 Research Locale

Canaman is a fourth class municipality located in the third district of Camarines Sur, Bicol Region. It occupies 0.8% of the total land area of the province and situated in the Bicol River basin. With 24 barangays under its jurisdiction, the municipality is relatively flat in terms of topography with localized depressions along the coastal regions. According to the 2009 Community Based Monitoring System data, Canaman has 29,933 or 1.77% of the total population in Camarines Sur province. A total of 19,327 or 61% live in the nine urban barangays of Baras, Del Rosario, Dinaga, Haring, Pangpang, San Agustin, San Vicente, Sta. Cruz and Tibgao while the remaining 39% or 12,256 live in the 15 rural barangays.

From 1939 to 2007, the municipality posted an increasing growth rates in varying degrees annually. For 2000-2007, Canaman posted a growth rate of 2.64% which is lower by 1.4% compared to the 4.04% growth rate posted during the 1995-2000 period. The 2007 data revealed that urban barangays posted an average population density of 24.4 persons per hectare while the rural barangays has 3.5 persons per hectare. The total municipal gross population density is 7.3 persons/hectare. Moreover, the population growth rate is expected to yield a projection of 36,361 for the entire municipality at the end of 2012 and will reach the forty thousand mark by 2020. In February 2002, the municipality approved its land use plan, which was based on the existing land use and analysis of capability and suitability of resources for specific functional uses. It showed that 84.31% of the total land area is mainly utilized for cropland and built-up areas represents 9.68%.

1.3 Statement of the Problems & Objectives

This paper was inspired by the study of Frick & Grabka in 2002 for the German Institute for Economic Research. It also wanted to answer the question of whether or not income advantages derived from imputed rent exacerbate or level out existing differences in income, particularly salaries and wages, thereby having a relative impact. In particular, is imputed rent also prevalent in all barangays of Canaman, Camarines Sur thereby increasing salaries and wages inequality in the area? What is the effect of imputed rent on the salaries and wages of households in Canaman, Camarines Sur?

1.4 Significance of the Study



The municipality of Canaman clearly stated their development goals and strategies for the Executive Legislative Agenda at the end of 2013. One of their objectives is to identify sites for public socialized housing in order for housing deficiency to decrease and assist those in makeshift housing to acquire safe and decent houses. They also want to provide better living conditions to informal settlers by establishing concrete housing projects and providing lots in the resettlement area, which will be acquired and distributed by selected beneficiaries. The study on imputed rent and its impact on the salaries and wages of households can be a learning paradigm in the executive level of the municipality to enhance the living conditions and state of income in the area. This may be a small contribution with the Executive Legislative Agenda but this can also address current issues relative to housing and gain insights for future planning. This paper is also designed to help future researchers develop more studies relative to household income in other municipalities in the country since much has been said already about the role that government can play in delivering services.

1.5 Literature Review

In the literature review conducted by the proponent, various concepts on the variables used in the study will be discussed in reference to Canberra Group, an international expert group on household income statistics organized in 1986 to address problems on conceptual and practical issues pertaining to the production of income distribution. Thus, the concept behind the variables used in the study conform to the revised international guidelines set by these experts. A clear definition of household and its impact on income sharing was discussed first with reference to the current household situation in Canaman, Camarines Sur before the analysis of employee income and its components. This was followed by a rigorous discussion on the concept of imputed rent before a synthesis on the association of persons on their dwellings.

The definition of a household is usually perceived as simple but there are gray areas that come with how it is described in literature. The one general definition attributed to a household are people who share a dwelling and a more restrictive version would be those who share a dwelling and who usually eat together. However, the latter is commonly used for household budget surveys.

Households may include persons who are not related by blood, marriage or adoption to all of the other household members (Canberra Group, 2001). But with this definition sharing assumption has been neglected. In the extreme, some household members such as roomers and boarders may pay other household members for the services that they receive. The other household members may share in this income like the payments of the roomers and boarders but they do not share in all of the income of the roomers and boarders. It is evident that at the household level, the income sharing assumption is not always valid.

On the other hand, there are instances of income sharing which cross household boundaries. There are developing countries like the Philippines where the extended family is of great importance, even to the extent that family members living abroad make substantial



transfers to those in the home country. In developed countries, high income elderly families often transfer income to adult children or even grand children living in separate dwellings. In some cases, this serves to reduce their long-term income tax liability. Between-household sharing of income also occurs when families break up and one spouse, who usually has no custody of the children, makes payments to the former spouse either for the support of the spouse or for the support of the children. Employee income is the sum of remuneration received from an employer in both cash and non-cash form. It includes payments made by the employer on the employee's behalf, like the Social Security System, PhilHealth and PAGIBIG fund.

The profit that a self-employed person makes out of his or her unincorporated enterprise includes an element, which rewards the labour expended and also an element covering the return to the capital employed (Canberra Group, 2001). The business of a self-employed person may make a loss, which is regarded as negative income. Households not only consume goods and services which they purchase or receive from others, but also goods which they produce themselves. Imputed income thus includes goods produced for home consumption, less the cost of inputs other than the imputed value of own labour. When the goods are actually sold, placing a value on them is relatively straightforward. Sometimes, though, the goods will be intended solely for use by the household, or for exchange with another household through bartering. This is especially the case for subsistence agriculture in many developing countries but is conceptually true even for kitchen gardens or allotments in developed countries.

Households may receive income from renting out dwellings, other buildings, vehicles, and so on. In the macro accounts, such receipts are regarded as part of self employment income, since the household is regarded as operating as an unincorporated enterprise by renting out their possessions. However, in many countries such income is classified in the micro income distribution statistics as property income because it is viewed as the result of 'lending' an in-kind asset to someone else.

A "family" occupying a mortgage-free house clearly has a higher level of living than an otherwise demographically and financially identical family renting their accommodation. One might argue that all of housing related imputed income should be attributed to those holding legal title to the dwelling. However, this is a classic case of income sharing. Everyone in the dwelling consumes the housing services provided by the dwelling and so everyone in the dwelling should be included among those receiving the imputed income.

The issue of imputed rent is one of great importance to income distribution studies. First, imputed rent is very important in many nations. For instance, in Spain, 86 per cent of households are homeowners (Eurostat 2000), while in other richer northern European nations the fraction of homeowners is much smaller, around 50 per cent (Smeeding et al. 1993). Second, home ownership confers an annual flow of consumption services which may offset other costs. Third, rental housing is often subsidised as well. If renters pay below market rents, with market rents made up by governments, there is an implicit rental subsidy in non-owned units as well. All three forms of imputed rent may be important in nations where



“public ownership” of housing is widespread. The main problem is the accurate measurement of imputed rent.

Net imputed return on the equity in one’s own home could also be estimated as the annual benefit from converting one’s net home equity into an annuity. If included in income, one must be careful that it is measured in a way that leads to greater international standardisation instead of nation-specific measures of its value. One suggestion is to use a low government interest rate multiplied by the net value of home equity (Smeeding et al, 1993). Yet one must still be wary of unreasonably high land values in certain large cities (eg Tokyo, Hong Kong, New York) that would distort the valuation of housing services for residents there. This method, while producing “comparable” estimates may yield unreasonably high estimates of imputed rent.

The standard practice is to say that persons are associated with the dwelling that is their usual place of residence. That is easy to say but much more difficult to put into practice. Failure to associate everyone with a dwelling is believed to be a major source of undercoverage in censuses of population and in household surveys using area samples. It might be dismissed as a problem for demographers but it also has serious implications in the assessment and analysis of income distributions.

2. METHODOLOGY

This paper will only focus on the total imputed rent from owned or rent-free house and/or lot, which is a total of 12 months imputed rent estimated by the household respondents when they participated in the census conducted by the Community-Based Monitoring System Network in 2009. Out of the 24 barangays in Canaman, Camarines Sur only 7 barangays were part of the study as these are the only barangays captured to date by the network. Furthermore, only total income from salaries and wages in cash will be used instead of adding the total salaries and wages in kind since the proportion of in kind to cash is very minimal and negligible.

In theory, imputed rent is the difference between the cost of renting one’s living arrangements less the cost actually incurred in owning the home. Thus one needs estimates of the gross rental value of the unit, minus owner’s costs such as taxes, depreciation, repair and upkeep, interest charges, property taxes, and other shelter costs. Proper estimation of imputed rent therefore requires a great deal of additional information about the unit itself if we are to estimate market rent. Further, the owner’s actual costs like taxes, upkeep and utility charges must also be assessed since true imputed rent is the difference between these two items.

The “aggregate income” approach, developed for international comparisons, assumes an estimate of gross rent and then deducts maintenance, operating, and insurance costs as well as taxes. Imputed rent is therefore placed in the same category as income from interest, dividends and letting or leasing of property (United Nations 1977). The Canberra Group also recommends including imputed *net* rent in calculations of disposable income in international surveys (Smeeding and Weinberg 2001).

3. RESULTS AND DISCUSSION

A total of 7 barangays out of 24 was used in the household census of the 2009 Community Based Monitoring System data using the 10200704 version of the questionnaire. A total of 6,533 households coming from 8 puroks or zones in Canaman, Camarines Sur were part of the data set. However, 330 households were excluded in this study because of the tenure status of the housing unit and lot that they occupied, which is only for rent. Keeping in mind that the data that was used is secondary (CBMS) the following approaches were integrated in the analysis of data. First, tenure status of the housing unit and lot occupied by the household was determined. As there are 8 choices in the category provided by CBMS, if the answer to the tenure status is 2 or “rent house/room including lot” this household will be excluded in the study since they were not asked for the estimate on the imputed rent per month for the house and lot. After the exclusion of some households, the absolute and relative relevance of imputed rent as measured in the respective panel data sets – in contrast to salaries and wages in cash was analyzed using regression through the Stata software.

TABLE 1

Tenure Status of Households in Canaman, Camarines Sur

Tenure Status	Frequency	Percentage
Owner, owner-like possession of house and lot	3,214	49.42%
Rent house/room including lot	330	5.07%
Own house/rent lot	172	2.64%
Own house, rent-free lot with consent of owner	1,978	30.42%
Own house, rent-free lot without consent of owner	91	1.40%
Rent-free house and lot with consent of owner	570	8.77%
Rent-free house and lot without consent of owner	14	0.22%
Other tenure status	134	2.06%

In the Household Profile Questionnaire of the Community-Based Monitoring System, the household respondents were asked regarding the tenure status of the housing unit and lot occupied by the household. There were 8 categorical choices in the questionnaire that indicate this status. 49.42% of the households in the 7 barangays own a house and lot while 30.42% households own their house but their lot is rent-free with consent from the owner. Only 5.07% of the households were excluded in the study since the tenure status of their housing unit and lot is for rent alone. Thus, they were not asked on the estimate for the imputed rent. This data also supported the information that a total of 2,282 households are living in makeshift or temporary housing while 1,212 are informal settlers.

TABLE 2
Number of Waged Members in a Household

Number of Waged Members In a Household	Frequency	Percentage
0	2,581	39.69%
1	2,662	40.93%
2	945	14.53%
3	231	3.55%
4	76	1.17%
5	8	0.12%

The number of waged members in a household was also identified in the Household Profile Questionnaire of the Community-Based Monitoring System. 39.69% of the households in the 7 barangays of Canaman, Camarines Sur do not have any employed member. 40.93% of the households would have at least 1 employed member and 14.53% would have 2 employed members. The maximum number of employed members in a household is 5, which only accounts for 0.12% in the 7 barangays of Canaman.

TABLE 3
Summary of Total Imputed Rent Descriptive Statistics

Average Imputed Rent	16,525.41
Maximum Amount of Imputed Rent	600,000
Standard Deviation	25,909.88
Variance	6.71
Skewness	7.816431
Kurtosis	135.5486

The household respondents were asked to identify the imputed rent per month for their house and lot. The imputed rent is an estimate perceived by the respondent. The computation for the total imputed rent is derived by multiplying the imputed rent per month by 12 months. The average imputed rent is Php 16,525.41 with a maximum amount of Php 600,000 on an annual basis. Standard deviation of 25,909.88 is a measure of how spread out the data points are for the imputed rent. This high standard deviation indicates that the data points are not so clustered around the average. The skewness of 7.816 indicates that the data is skewed to the right, which indicates that most of the imputed rent values are on the left of the mean. The data also has a leptokurtic distribution, which is a bit sharper than a normal distribution. This is an indication that the values are concentrated around the mean.

4. CONCLUSION

There are many cross-national differences, such as preferences in types of housing. The housing opinions and preferences of consumers will be all the more decisive in future. National housing cultures, family systems and individual housing preferences differ in practice between countries. The importance of the role of the state in housing is sometimes underestimated, as also is the role of family and kin in the modern world. The importance of household formation as a result of housing habits and demography should be emphasised in



addition to income and finances. Intergenerational transfers of housing wealth are increasing with increased affluence. In future they will probably also generate growing 'hereditary' income and housing inequalities between households with different socio-economic family backgrounds. Family help and self-building not only come from history but in current crises of housing affordability represent solutions that consumers seek from outside the professional building sector, both to achieve cost savings and to gain more control and say in their own housing arrangements.

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