

## **How does Hidden Income Affect Income Distribution? Evidence from Guangzhou, China**

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The accuracy of income data in urban China has long been controversial. Some believe that due to the absence of large amounts of hidden income in statistics, urban income overall has been far underestimated. A recent study by Professor Xiaolu Wang (2010) of the China Reform Foundation estimates that almost 10 trillion yuan, or 30% of GDP, is hidden from the official urban income figures provided by the National Bureau of Statistics (NBS). Furthermore, nearly two-thirds of the hidden income is in the hands of the top decile of the income distribution. This study further shows that, between 2005 and 2008, hidden income expanded by 91%. This speed was almost 20% faster than that of the GDP.

The existence of such a huge amount of hidden income has important implications for the Chinese and world economy. On the one hand, this might mean that the Chinese are richer than we have known. If this is true, we may find reasonable explanations for certain situations in recent years, such as the starkly high housing price-to-income ratios in Chinese cities, the persistently over-heated real estate market, and the pouring of immense amounts of personal funds into the stock market. On the other hand, many believe the rosy income growth picture is merely a myth. For instance, many blue-and-white collar workers insist that there is no increases—sometimes there is even a decrease—in their actual disposable income compared with the consumer price indices (CPI). The paradox created by the two contrasting views highlights the serious problems existing in the current income distribution of China. Indeed, as Wang (2010) has concluded, the existence of hidden income has greatly expanded the existing income gap and may lead to serious distortion of the national income distribution.

Despite the alarmingly high level of hidden income in China, there has been little empirical evidence on its sources and distribution due to lack of micro data. Moreover, even if data are available, hidden income is extremely hard to measure as most of it is either illegal or lacks a clear definition by law or regulations in terms of its legitimacy, therefore deterring people from revealing its existence. Wang (2010) discusses this challenge at length and identifies the following four sources of hidden income: 1) abuse of power for personal gains; 2) public investment and corruption; 3) rent seeking from land supply; and 4) distribution of other monopolized profits.

Using a unique dataset from a survey conducted by the Guangzhou Land Resources and Housing Administrative Bureau during November 2009-January 2010, this article examines the sources and distribution of hidden income of residents from different occupational backgrounds, taking into consideration their explicit income and other socioeconomic characteristics. The study population was middle-class individuals (with an annual income of 100 thousand yuan or less) and families (with an annual income of 200 thousand yuan or less) from various occupational backgrounds. The dataset has a large sample size of 15,789 respondents.

Like most other surveys, this survey did not directly ask about the sources and values of hidden income, which would have not yielded any reliable responses. Then how to measure hidden income? With the skyrocketing of housing price in China, housing expenditures have become the largest part of family consumption. Thus it is reasonable to infer residents' hidden income from their housing affordability. We expect that one's housing affordability is determined largely by two factors: visible or explicit income and hidden income. The dataset used in this study contains two questions about housing affordability: total affordable housing price (TAHP) and affordable monthly mortgage payment (AMMP). After taking into account respondents' explicit income, we expect that the housing affordability unexplained by explicit income is a reasonable approximation of their hidden income. Specifically, we expect TAHP to capture respondents' overall hidden income and AMMP to capture their stable monthly hidden income. Both TAHP and AMMP are measured in categories of estimated housing affordability. For example, TAHP is measured by if a respondent's total affordable housing price is 300,000 yuan and below, 300,000 to 400,000 yuan, 400,000 to 500,000 yuan, 500,000 to 600,000 yuan, 600,000 to 800,000 yuan, and 800,000 and above.

We use ordered probit regression models to examine which occupational groups tend to have higher hidden income, as measured by TAHP and AMMP, after accounting for respondents' visible or explicit income and various demographic characteristics. Occupational background is measured by a set of dummy variables indicating which of the following occupations a respondent belongs to: civil servant, state-owned enterprise, institutions, colleges or research institutions, foreign funded enterprise, and other. Visible income includes wages, accumulated personal housing fund, housing subsidies, and other visible income sources.

Further, we examine how accounting for hidden income changes the overall income distribution of the city. We compare income distributions based on visible income only and based on the combination of visible and hidden income to see how big a difference is made by hidden income. Specifically, we will compare the Gini coefficients and the shares of income owned by the various deciles based on the two income definitions (visible income only and visible income combined with hidden income). These comparisons can reveal the extent to which hidden income affects the overall city income distribution.

Preliminary results suggest that civil servants had the highest and the most stable hidden income, followed by employees in state-owned enterprises and colleges or research institutions. Employees of other public institutions, private enterprises, and foreign enterprises had significantly less hidden income. Hidden income enlarged the income gaps in urban China to a great extent. It was heavily held by the top income deciles, while the bottom deciles had virtually no hidden income. These findings suggest that hidden income is indeed widespread in urban China and had serious impacts on the overall income distribution. This important problem warrants further empirical investigations.