

# Impact of Opportunity Cost of Women on Households' Food Consumption: Evidence from Fish and Meat Consumption in Selected Provinces of China

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## 1. Introduction

The impact of an easier access to jobs or increasing in social status of women on food consumption has become a hot issue in the developing countries. China has also been experiencing a rapid and stable development, and many changes have occurred simultaneously in food demand accompanying the development of economy. At the same time, the under developing economic environment provides an easier access to different kinds of jobs for women, as well as the changes of social status of women and the capabilities women owned.

Since the rising value of women's time in labor market would add up the opportunity cost of preparing food at home, the ratio of food away from home would expected to increase when women enter the labor market, which has been proved [1]. The change in opportunity cost of women would affect on not only decision between FAH and FAFH, but also choice of food menu at home. Thus, the current paper wants to find out how opportunity cost of women works on the decision making of food menu at home, especially on alternation between fish consumption and meat consumption. Some earlier research have found that fish is generally perceived as a relatively inconvenient type of food [2], while others indicated that fish is concerned to be a health food preferred by individuals having healthy awareness [3], so how do household make food consumption choice under the two common understandings is examined from the micro data collected in some provinces of China in this study.

## 2. Empirical Model

### 2.1. Data

The panel data of 2000, 2004, and 2006 from China Health and Nutrition Survey (CHNS), carried out by the National Institute of Nutrition and Food Safety at the Chinese Center for Disease Control and Prevention and Carolina Population Center at the University of North Carolina, are used in this study. And self-employment households are not included in this study since the consumption behavior is strongly influenced by the content of home business.

### 2.2. Hypotheses

In order to approach the objective mentioned above, the following hypotheses are tested here.

- (1) Woman with a job is considered to have higher opportunity cost of time than full time housewife, so household with working woman is assumed to prefer meat than fish, since fish dishes are time consuming.
- (2) Woman received higher level education is assumed to have higher healthy awareness, thus household with higher education level wife is predicted to have less price elastic consumption in fish, or have preference with less substitution between fish and meat for the relative price change of both.

### 2.3. Model specification

The following linear function of relative consumption between fish and meat at home is estimated,

$$\log(X_{it}^f/X_{it}^m) = \beta_0 + \beta_m \log income_{it} + \beta_s hhsz_{it} + \beta_j job_{it} + \beta_c chil_{it} + \beta_p dumprov_j + \sigma \log(P_{it}^f/P_{it}^m) + \sigma_j \log(P_{it}^f/P_{it}^m) * job_{it} + \varepsilon_{it} \quad (1)$$

Where subscription  $i$  is household id,  $t$  is wave,  $j$  is province id, and superscript  $m$  means meat, fish labels as  $f$ . For the variables, we denote consumption as  $X$ , per capita household income as  $income$ , number of family member as  $hhsz$ , job status of wife as  $job$ , child information as  $chil$ , province dummy as  $dumprov$ , and free market price as  $P$  in the estimation.

In order to examine the first hypothesis (1), the sign of parameter  $\beta_j$  is tested. The inconvenience in preparing fish dishes would induce this parameter negative.

For approaching the second hypothesis (2), the knowledge about fish consumption is implicitly considered. Then, the estimations for subsamples of household with higher educated wife and lower educated wife would be compared, especially in elasticity of substitution parameter  $\sigma$ , in considering that educational attainment or schooling years of woman has directly and strongly influence on their occupation status [4, 5].

### 3. Result and Discussion

Random and fixed effects estimations are conducted in considering the unobservable household effects. For lower education group, relative price between fish and meat, and job status of wife show significant negative relationship with relative consumption between fish and meat. On the other hand, for the higher education level group, job status of wife has also shows a significant negative relationship with relative consumption, and household income shows a significant positive relationship with relative consumption.

From the results, we could draw the conclusion that household with higher educated wife has lower substitution between fish and meat for given relative price change, and it may suggest that education level can works in decision making of food menu at home in utilizing the knowledge about nutritional intakes. Furthermore, under controlling education level, household with fulltime housewife consumes more fish than that with working woman. This also confirms some earlier indication that fish is generally perceived as a relatively inconvenient type of food in preparing. Thus, the opportunity cost of time of wife could be considered playing an important role in food at home decision making.

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