## Accepted Manuscript

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PII:	S1570-677X(18)30099-6
DOI:	https://doi.org/doi:10.1016/j.ehb.2018.09.002
Reference:	EHB 742
To appear in:	Economics and Human Biology
Received date:	3-4-2018
Revised date:	13-8-2018
Accepted date:	16-9-2018

Please cite this article as: Huong Trinh Thi, Michel Simioni, Christine ThomasndashAgnan, Decomposition of Changes in the Consumption of Macronutrients in Vietnam Between 2004 and 2014, <*![CDATA[Economics and Human Biology]]*> (2018), https://doi.org/10.1016/j.ehb.2018.09.002

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## Decomposition of Changes in the Consumption of Macronutrients in Vietnam Between 2004 and 2014

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## Abstract

Vietnam is undergoing a nutritional transition like many middle-income countries. This transition is characterized by an increase in per capita total calorie intake resulting from an increase in the consumption of fat and protein while the carbohydrate consumption decreases. This paper proposes to highlight the sociodemographic drivers of this transition over the period 2004-2014, using Vietnam Household Living Standard Survey data. We implement a method of decomposition of between-year differences in economic outcomes recently proposed in the literature. This method decomposes the between-year change in various indicators related to the outcome distribution (mean, median, quantiles...) into the effect due to between-year change in the conditional distribution of the outcome given sociodemographic characteristics, or "structure effect", and the effect due to the differences in sociodemographic characteristics across years, or "composition effect". In turn, this last effect is decomposed into direct contributions of each sociodemographic characteristics and effects of their interactions. The composition effect, always positive, generally outweighs the structure effect when considering the between-year changes in distributions of per capita calorie intake or calorie intake coming from protein or fat. The effects of changes in the composition of the Vietnamese population thus overcome the effects of changes in preferences of the same population. This finding is reversed in the case of carbohydrates. Food expenditure and household size appear to be the main contributors to the composition effect. The positive effects of these two variables explain well most of the between-year shifts observed in the calorie intake distributions. Urbanization and level of education contribute negatively to the composition effect, with the noticeable exception of fat where the effect of urbanization is positive. But these two variables effects are negligible compared to those of food expenditure and household size.

*Keywords:* Nutrition transition, macronutrient consumption, decomposition methods in economics, copula, Vietnam.

Preprint submitted to Economics and Human Biology

August 13, 2018

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