

## Chapter 3

# Correlations and Patterns of Food and Health Consumer Expenditure

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### ABSTRACT

*Human diet and health will always be a topical issue irrespective of the times, society, economic development, etc. The aim of this chapter is to highlight the presence or absence of correlations between food consumer expenditure and health goods and services consumer expenditure. Over three-quarters of the correlations between the consumer expenditure categories and subcategories are statistically significant and approximately a half of them underscore a moderate intensity. The patterns of the relationship between food consumer expenditure and health goods and services consumer expenditure for the same countries are identified. Twenty patterns which contain country groups are pointed out for the ten connections among consumer expenditure categories. The correlation between high food consumer expenditure and the high weight of people who are suffering from specific diseases is emphasized.*

### INTRODUCTION

According to Maslow's hierarchy of needs, the basic needs, which are known as fundamental physiological needs, consist in numerous needs that cannot be exactly identified, but hunger is one important need both for human beings and animals (Maslow, 2013).

As regards the health need, more exactly physical health, Sheldon (2004) states that Maslow did not include this type of need in his hierarchy of needs, assuming that it is an implicit need for most of the people, but this need is very important for sick persons.

The influence of the food quality and quantity on human health is an issue that was studied and proved by many researchers such as D'Mello (2003), Spark (2007), Nakagawa, Sato & Gatlin (2007), Brevik & Burgess (2013), Ene (2014), Bagchi, Preuss & Swaroop (2015), etc.

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## ***Correlations and Patterns of Food and Health Consumer Expenditure***

In order to satisfy food and health needs, some expenditure must be made. This is measured by indicators such as food consumer expenditure and health goods and services consumer expenditure.

The first goal of this chapter is to underscore the correlation between food consumer expenditure and health goods and services consumer expenditure for 71 countries from North America, South America, Europe, Africa, Asia and Australia.

The second goal is to highlight the patterns of the relationship between food consumer expenditure and health goods and services consumer expenditure for the same 71 countries.

Additionally, the weight of sick people who have a series of diseases which are related to particular food consumption patterns is presented in order to show that this weight correlates with the level of consumer expenditure for some foods.

## **BACKGROUND**

According to the U.S. Bureau of Labor Statistics (2015), the consumer expenditure survey (CE) offers information about both the consumers' expenditures and incomes and the consumers' characteristics.

There are various studies that focus on different approaches to consumer expenditure. A comprehensive study is made by Dillman & House (2013) who describe the main issues of consumer expenditure surveys such as design, implementation, costs, the domains in which the data is used, the panel's investigation, underreporting the data, differences between interview and diary surveys, sources of response error, nonexpenditure data, etc.

Some researchers examine the importance of consumer expenditure components, the volatility of consumer durable goods and spending, the consumer credit and debt, the influence of the consumer optimism and pessimism regarding the economy on their expenses for consumer goods and services, etc. (Frumkin, 2015, pp. 123-142).

Other studies focus on the methods used to collect consumer expenditure data (Crossley & Winter, 2015, pp. 23-52), on designing a method to measure poverty which takes into account the household expenditure net of out-of-pocket spending on health care (O'Donnell, Van Doorslaer, Wagstaff & Lindelow, 2008, pp. 213-220), the introduction of the internet panel as a new measurement method for household expenditures (Hurd & Rohwedder, 2015a, pp. 365-387), the assessment of the consumer expenditure interview survey and consumer expenditure diary survey (Bee, Meyer & Sullivan, 2015, pp. 204-240), etc.

Further analyses examine the importance of panel structure in interview surveys for gathering the consumer expenditure data (Parker, Souleles & Carroll, 2015, pp. 75-99), the crucial role of the balance edit in obtaining quality data of households spending in the consumer expenditure survey (Fricker, Kopp & To, 2015, pp. 347-364), the consequences of different methods used to collect consumer expenditure data in various countries on the quality of data gathered (Barrett, Levell & Milligan, 2015, pp. 263-288), the efficiency of Consumption and Activities Mail Survey (CAMS) against consumer expenditure survey in measuring saving, inequality, and finances of households (Hurd & Rohwedder, 2015b, pp. 388-413), the measurement of household's expenditure patterns by using surveys whose timeframe covers at least one year against diary surveys which involve two weeks or quarterly frequency for data collection (Leicester, 2015, pp. 441-492), etc.

Several researchers look into the estimation of the consumption inequality for goods and services by using different methods (Attanasio, Hurst & Pistaferri, 2015, pp. 100-140), into the high weight of recall period type and length in the consumer responding behavior in the consumer expenditure survey

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