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EXAMINING THE RELATION BETWEEN THE LEVEL OF ECONOMIC DEVELOPMENT AND CONSUMPTION EXPENDITURE FOR BREAD AND CEREALS IN THE EU MEMBER STATES

The existing literature has established a correlation between households' income and their expenditure on bread and cereals: lower-income households spend a larger fraction of their income on the consumption of bread and cereals compared to higher-income households. We investigate whether countries with lower levels of economic development consume less bread and cereals compared to countries with higher levels of economic development.

We measure the level of economic development with the gross value added (GVA) per employed and apply cluster analysis to examine whether the level of economic development is negatively correlated with the expenditure on bread and cereals. Our main results support the hypothesis that such a correlation exists, and therefore, our study is consistent with the view that a statistical relationship, similar to the one observed at households' level, can also be found at a country to their economic development.

For this purpose, we examine European Union Member States. For 2010 data for GVA per employed for Malta is missing, as well as the expenditure data for Netherland. The using data is according to:

- Gross value added chain-linked volumes at year 2010 (in million euros) – GVA at basic prices is output at basic prices minus intermediate consumption at purchaser prices [1]. When add subsidies to GDP and subtract taxes from it we obtain the GVA. We use GVA per employed in order to control differences across countries based on their tax system.

- Number of employed (in thousands) – employed persons are all persons aged 15 and over who, during the reference week, worked at least one hour for pay, profit or family gain, or were not at work but had a job or business from which they were temporarily absent [1].

- Overall structure of consumption expenditure by detailed COICOP level (per 1000) – COICOP is classification by purpose of household consumption includes the quantities of main foods and beverages consumed at home. (Overall structure). Overall structure shows what percentage of the total expenditure goes to bread and cereals. This allows me to compare expenditure on bread and cereals across countries.

The analysis is based on a two-step clustering procedure, which relies on an agglomerative hierarchical method to determine the number of clusters automatically [2]. Hierarchical clustering method refers to the process by which the clusters are repeatedly merged, until a single cluster groups all available records. Specifically, in the pre-clustering step each individual data point is scanned and - using the Schwartz's Bayesian Criterion – is allocated to one of the previously formed cluster or to an entirely new cluster (given that all of our variables are continuous, we apply the Euclidean distance at this point in the procedure).

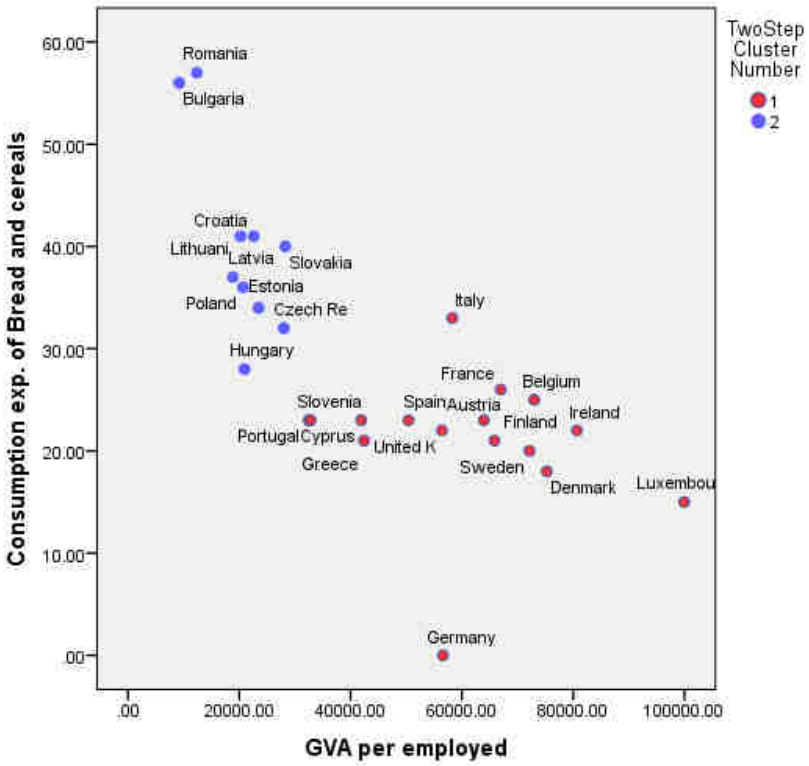

Fig. 1. Belonging of countries to clusters

The results of our clustering approach are the following: of the 26 countries, 10 were assigned to the first cluster and 16 to the second. First cluster includes Slovakia, Czech Republic, Estonia, Croatia, Hungary, Poland, Lithuania, Latvia, Romania and Bulgaria. The second cluster includes Luxembourg, Ireland, Denmark, Belgium, Sweden, France, Austria, Italy, Germany, United Kingdom, Spain, Greece, Cyprus, Slovenia and Portugal.

While the level of economic development appears to be the more important variable behind the formation of our clusters, we find that both the level of economic development and the consumption of bread and cereals exert a significant influence in the cluster formation. Furthermore, the centroids show a good cluster quality implying that the clusters are well separated by the continuous variables. The countries in cluster 1 have a high level of economic development and low consumption of bread and cereals, in contrast, the countries in cluster 2 have a low level of economic development and high consumption of bread and cereals. Hence, our analysis supports the hypothesis that counties with higher levels of economic development exhibit correspondingly lower expenditure consumption of bread and cereals.

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ПРОЦЕДУРИ ЗДІЙСНЕННЯ АНАЛІЗУ ФІНАНСОВОГО СТАНУ ПІДПРИЄМСТВА

Актуальність фінансового аналізу для підприємства призвела до того, що в сучасній економічній літературі існують безліч методичних матеріалів, програмних продуктів, що описують різні методики фінансового аналізу. Так, окремі автори пропонують розділяти методику фінансового аналізу на два етапи: проведення експрес – аналізу за допомогою відбору невеликої кількості найбільш істотних показників і відстеження їх динаміки, а потім проведення поглибленого аналізу з оцінкою складу ресурсів, їх структури фінансових результатів діяльності й оцінку співвідношення власних і позикових коштів [1;