ABSTRACT: The globalization process of the last half century entailed a growing trade in agricultural and food products. As a result, water has been transferred among countries, embodied in these goods. This paper studies the evolution of virtual water flows over the long term, analyzing the main driving factors through Decomposition Analysis. It contributes to the existing literature by offering a dynamic and economic interpretation of the historical changes in virtual water trade flows. In particular, this study points to a gradual increase in virtual water exchange, related to the upsurge of agricultural and food products trade in the world from 1965 to 2010. Although the origins and destinations of virtual water have changed, North America stands out as the primary net exporter of virtual water. Europe and Asia, on the other hand, with a high dependency on foreign water resources, appear as net importers of virtual water. Despite improvements in agricultural yields and the reallocation of production, the virtual water trade continues to increase globally via these significant commercial exchanges.