However, the United States supermarkets were the «valve of salvation» for Ecuadorian floriculture during the pandemic.

Then e-commerce in florists with home delivery services soared, which has allowed the sustainability of the industry, thanks to the prompt reaction of Ecuadorian entrepreneurs.

By investing in human development, the adoption of technological advances, the proper management of pests and diseases and the sustainable use of natural resources, we can continue to grow globally by opening new markets such as Ukraine, providing greater job opportunities to thousands of people from the two countries.

With the help of ICT we can be more flexible in the markets because they restructure to market changes.

It allows creating new possibilities of market communication.

They are interactive, which implies the participation of the user in the information processing process and the adaptation of the available resources to their needs.

We can think that the flower market, especially the flowers of eternity, is a market that is not yet known, but thanks to new technological tools we can take the product to other borders and thus we can make our cultures, traditions and traditions known. the potential that we have in each of the countries when exposing the whole world.

Kharchenko Tetyana, Liu Ziming
Sumy National Agrarian University
Sumy

VAR MODEL PARAMETER ESTIMATION OF THE RELATIONSHIP BETWEEN SPORTS INDUSTRY DEVELOPMENT AND ECONOMIC GROWTH

With the development of economy, people's pursuit of quality of life is increasing day by day, which lays a foundation for the development of the sports industry in China. For example, in some western developed countries, the contribution of the sports industry to economy has far exceeded that of traditional industry and become a new growth point of economic development. Although China's sports industry has made certain development, it is still in its infancy. Compared with the western developed countries, the development of China's sports industry is still relatively slow, and there are still some problems to be solved in the development of sports industry. This paper mainly studies the relationship between the sports industry and economic development in China. Based on the statistical index data of the national economy and the sports industry development from 2011 to 2020, the relationship between the sports industry development and national economic growth in China is empirically analyzed by using mathematical statistics and the VAR model.

Data sources and processing. This study mainly analyzes the relationship between the sports industry and economic growth in China, and selects added value (TYC) and gross domestic product (GDP) as the analysis variables. The sample range is 2010-2020. The data are mainly from China Statistical Yearbook, China Tertiary Industry Statistics Bulletin, State Sports Administration Sports Industry Statistics Bulletin, etc.

Since added value (TYC) of the sports industry and gross domestic product (GDP) are time series, there may be heteroscedasticity. Therefore, before the VAR model is empirical, the TYC and GDP are pretreated and recorded as lnTYC, lnGDP by taking the natural logarithm of variables This method does not change the cointegration relationship of the original variable, can make the time series linear and eliminate the influence of heteroscedasticity.

Stationary test. To prevent the pseudo-return phenomenon when establishing the VAR model of the sports industry added value (TYC) and gross domestic product (GDP), it is necessary to test the unit root of the sequence separately. In this paper, the ADF method is used to test the mathematical expression:

$$\Delta Y_T = \gamma Y_{t-1} + \alpha + \delta_t + \sum_{i=1}^{p} \beta_i \Delta Y_{t-1} + \varepsilon_t, t = 1,2.....T$$

Δ is a first-order difference operator, Yt, Yt-1 are variable values for period t, t-1; t as a temporal trend; α displacement, δ coefficient t the trend term; βi, (i = 1, ..., T) is an unknown parameter; p is lag value; εt is a random disturbance term. ADF test assumes, H0 : γ = 0, H1 : γ = 1. If the ADF test value is greater than the critical value, H0, accepted That is, the sequence has a unit root, Is a nonstationary sequence; Conversely, H1, accepted is a stationary sequence.

Table 1

Stationary Test of Added Value and Gross Domestic Product of Sports Industry

Variable	ADF	(C, T, K)		T statistics		P Value	Stationeriness
			1 % critical mass	5 % critical mass	10 % critical mass		
lnGDP	-0.320854	C,0,1	-5.295384	-4.008157	-3.460791	P>0.1	non-stationary
lnTYC	9.401833	C,0,1	-2.816740	-1.982344	-1.601144	P>0.1	non-stationary
ΔlnGDP	-1.046988	C,0,1	-2.847250	-1.988198	-1.600140	P>0.1	non-stationary
ΔlnTYC	0.208164	C,0,1	-2.847250	-1.988198	-1.600140	P>0.1	non-stationary
Δ2lnGDP	-3.535064	C,0,1	-2.937216	-2.006292	-1.598068	P>0.1	stationary
Δ2lnTYC	-3.005171	C,0,1	-2.886101	-1.995865	-1.599088	P>0.1	stationary

Source: calculated by author.

Table 1 shows that the ADF test values lnTYC, lnGDP the sequence are all greater than the critical values at 10% confidence level. Under the assumption of H0, the two sequences have unit roots and are nonstationary sequences. The first order difference is carried out for the two sequences, ADF the test values are still greater than the critical values at the 10% confidence level, and the first order difference sequence is ΔlnTYC, ΔlnGDP a nonstationary sequence. After the second-order

difference, the ADF test value is still less than the critical value at the confidence level of 1%, and the second order difference sequence Δ2lnTYC, Δ2lnGDP is a stationary sequence. Hence the lnTYC, lnGDP, there is a second order single integral I(2), at the confidence level of 1%, that is, the second order difference becomes a stationary sequence, which satisfies the stationary condition.

Table 2

Test of Co-integration Relationship between Added Value and Gross Domestic Product of Sports Industry

Hypothesis	Characteristic value	Trace test statistics	Critical value (5%)	P value	Conclusion
None	0.941846	25.60191	14.26460	0.0006	Reject
At most 1	0.000989	0.008909	3.841466	0.9244	Accept

Source: calculated by author.

Table 2 shows that, the original hypothesis none. There is no cointegration relationship between sequence lnTYC and lnGDP. The statistical value of the trace test is 25.60191, 14.26460 ($P < 0.01$), considering that there is at least one cointegration relationship. The original hypothesis At most 1 shows that the sequence lnTYC has at most one cointegration relationship with the lnGDP. This assumes a trace test statistic of 0.008909, below the 5% confidence interval critical value 14.26460 ($P > 0.05$), accept the original hypothesis. The standardized cointegration equation estimated from the results of the cointegration test is as follows:

$$\ln GDP = 0.738763 \ln TYC + 7.212310$$

The fitting index of the cointegration equation is R2=0.983076, FR2=522.7809 (PFR2 = 0.01), which indicates that the fitting effect of the cointegration equation is good and the long-term equilibrium relationship between them can be well-reflected.

Conclusions. There is a high correlation between the sports industry and economic development. The sports industry should be based on a certain level of economic development. At the same time, the development of the sports industry to a certain stage will have a «multiplier effect «. The development of the sports industry in China has played an important role in stimulating domestic demand, promoting economic development and growth, and promoting the construction of socialist spiritual civilization. However, compared with the western developed countries, China's sports industry is still in its infancy, and the role of the sports industry in economic development is still very limited. Therefore, the development of the sports industry has become a new growth point of economic development. Only by actively adjusting the structure of the sports industry, formulating strategic plans for the development of the sports industry in time, and speeding up the reform of market value and competition mechanism of the sports industry, can let the sports industry play its important role in economic growth.

References:

1. Geta. D. Trend, strategies, and issues for health [J]. The Sport Business Monthly Magazine, 2001 (01):2-10.

2. Sagas, Michael. Issues and trend in the United States sports industry: Marketing implications [J]. ASPES Sport industry seminar proceedings. 2004(03):11-15.

3. Shleifer, A. & L. Summers (1998). Breach of Trust in Hostile Takeoers. in A. Auerbach (ed.) , Corporate Takeovers:Causes and Consequences [C]. Chicago: University of Chicago Press.

4. Wu Chaolin. Sports industry economics [M]. Beijing: High Education Press, 2006 (in Chinese).

Tetiana Khvalyboha, Anastasiia Didukh
West Ukrainian National University
Ternopil

MEASURING THE PERFORMANCE OF E-COMMERCE WEBSITES

Effective web-based selling requires businesses to have adequate knowledge of how to measure the performance of their website as part of their management practices. Clear, useful measurements that capture website performance have long enabled businesses to improve strategies and operations as part of their evaluation effort. Given the website is a sales channel (sometimes a company's sole interface) between the business and customers and the world at large, plus the growing demands to see returns on internet related investments, a stronger focus on performance is becoming critical for internet–based e-commerce. In addition, the proliferation of websites, and the many calls from businesses for their use, has prompted researchers to investigate the effectiveness of such initiatives. However, this would not be possible without an appropriate tool for measuring the performance of their websites.

Measuring the performance of a website has been proposed in many ways and various contexts over the past decade. In many instances, a single or a collection of items were used to represent website performance. However, website performance is neither simple nor straight forward. Website performance is a complex concept; therefore its measurement is expected to be multidimensional in nature. The different perspectives are only adding another layer of complexity to the construct measurements. While the user and the designer perspectives are well advanced in the literature, there are sparse studies that address the owners' needs. Today, no multi-item scale is available to measure the performance of a website based on the owner's experience. The provision of such a scale will further enhance the owner's ability to realize benefits.

The importance of web performance metrics has been established in the literature since 2002 by Bremser and Chung; Huizingh; Jonathan; Wade and Nevo. e-commerce is one of the fields that implement such metrics but often there are controversies over the metrics to be used. Past studies indicate that issues pertaining to website management are of great importance to managers all over the world. Different metrics have been proposed in many ways and various contexts over the past decade. In general, however, practicing managers still have no structured set of