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## **Determining the Performance Measurement of SME from Economic Value Added: Study on Hungary, Somogy County**

**Abstract.** EVA (Economic Value Added) permits commercial businesses to figure out whether the business is operating in profit and the money can be put into effect into a more profitable source. A leading EVA is a sign that the company has a greater value. The goal of this study is to identify if SMEs' actions carried out on a daily basis are able to generate economic value added for their business. The study is based on a comparative study between Hungary and 28 EU countries. The study is carried out in Hungary's region of Somogy county. First, the variables for research were created and research was carried out at ground level. The research used the Expletory Factor analysis method to find EVA determinants. The results showed that determinants work together to reshape the regional industrial growth. The research demonstrated that finance and sluggish production are the major determinants in Somogy county. Entrepreneurs' skills and finance have the major impact, which means that to achieve a high growth in SMEs, policy makers have to solve these two problems and make the policy concentric toward finance and high skill development problem.

**Keywords:** Economic value added, small and medium-sized enterprises SMEs, performance measurement, Hungary, Somogy County

**JEL Classification:** L26, F64, G32

## **Introduction**

Small and medium-sized enterprises are the core of industrial development. They are essential for both developed and developing countries. Small and medium-sized enterprises have always represented the model of economic development indicating a substantial contribution to domestic production, considerable export earnings, low investment requirements, the generation of workplaces, and the effective improvement of foreign exchange income of the nation with low import-intensive operations.

The concept of economic value added (EVA) started to originate when Hamilton (1877) and Marshall (1890) perceived that companies can create profit if they earn more than their own capital cost and liabilities. EVA is used to measure the performance of a company; it is an indicator of how well the firm is performing and gives investors the opportunity to analyze the company's condition (Petrescu & Apostol, 2009, p. 1).

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Nowadays, EVA is a management consulting tool developed by Stern Value Management, which owns the trademark of EVA™. Stern Value Management started to originate in the 1950s. In 1983, it developed EVA to maximize the firm's value creation. EVA expresses business performance. EVA has different fundamental requirements, a different view on management decisions considering the cost capital and the approach toward value creation for the shareholder (Daraban Marius Costin, 2017). There are very few studies available supporting the empirical validity of the performance management tool. For advanced economies, the EVA concept has noticeable significance, but validity and implementation are debatable. In advanced economies, EVA is an important performance measurement and management tool. EVA has superiority over other management tools (Sharma & Kumar, 2010, p. 1).

EVA provides facilitation as an investment decision monitoring tool which is applicable to the staff level, to the corporate level. In organizations, EVA can be used to create shareholder value by stretching the positive product spread with the multiplication of capital employed. This approach results in minimizing the capital tied for operation (Girotra & Yadav, 2001). EVA is an overall performance indicator instead of one applicable per company employee. In EVA, sales management is the main feature of the firm's inclusive performance and it has direct impact on customer satisfaction (Norton, 1992, p. 77). EVA adaptation as performance is very challenging in the United States of America. In recent years, the concept of EVA appeared in many other countries and is vastly used in Brazil, the UK, Germany, Australia, France, Canada and Mexico (Günther et al., 2000; Worthington and West, 2001). EVA was analysed on Germany's stock market and the results demonstrated that EPS is better than EVA for predicting the future performance and differences across the company.

Small and medium-sized enterprises (SMEs) are the chief support of Europe's economy. They comprise 99% of all businesses in the EU. In the past five years, they have brought into existence around 85% of new jobs and made available two-thirds of the whole private sector employment in the EU. The European Commission (EC) considers SMEs and entrepreneurship a decisive factor in economic growth, innovation, job creation, and social integration in the EU. Hungary's SME sector has an important position as far as employment is concerned. SMEs have the largest stake in terms of the number of enterprises, employment and value-added compared to the EU mainstream. Consequently, the average Hungarian SME is smaller – at least in employment terms – compared to the rest of the EU.

This research attempts to identify the strategies that can generate value for companies. After this, we try to examine different scientific points of view. Next, we try to generate a Likert scale investigating which factor can influence the company's economic value.

## **Literature Review**

The definition of an SME is significant for access to finance and EU support programmes aimed specifically at such enterprises. Depending on the country, the size of the enterprise can be categorized based on the number of employees, annual sales, assets, or any combination of these. Small to medium enterprises (SMEs) make up the vast majority of businesses in most countries. A business with a headcount of fewer than 250 is classified

as medium-sized; a business with a headcount of fewer than 50 is classified as small, and a business with a headcount of fewer than 10 is considered a micro-business.

Table 1. EU definition of SMEs

Category	Employees	Turnover	Balance sheet total
Micro	< 10	< €2 million	< €2 million
Small	< 50	< €10 million	< €10 million
Medium -sized	< 250	< €50 million	< €43 million

Source: Commission Recommendation of 6 May 2003 concerning the definition of micro, small, and medium-sized enterprises. (2003/361/EC), Official Journal of the European Union, L 124/36, 20 May 2003.

In 2018, the European Union revised the SME definition and announced an open public consultation on the official European Union's website. In the Eurostat database, SMEs are described on the basis of staff head count and the total turnover. In general, they are businesses which employ fewer than 250 staff and have an annual turnover of less than EUR 50 million.

There are very few performance measurement tools applicable to SMEs overall performance because SMEs are the sector which is limited by the resources and lack of managerial skills (Garengo et al., 2005). SMEs do not have the compared standard expertise to implement sophisticated and complex performance measurement systems and employ them successfully (Laitinen, 1996; Hussein et al., 1998). EVA contains all financial information from the income statement and contains all balance sheet components. EVA considers all resources, cost and profit generated from these resources (Young and O'Byrne, 2001, p. 5). EVA provides a platform that integrates operational and financial components on a single platform with a reassembling effect (Stern et al., 1998, p. 484).

EVA contains assets, operations, finance and sales. EVA measures all components, customers, internal processes, financial measures and learning but does not explain how these components are combined together and help to measure the global performance (Kaplan and Norton, 1992).

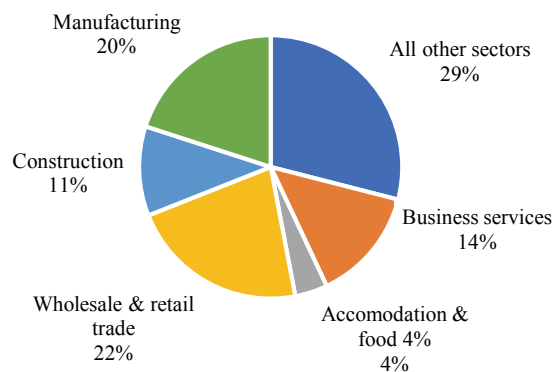


Fig. 1. Breakdown of SME value added in 2015 by main sector, EU28

Source: Annual report Europe's SMEs 2015.

Wholesale, retail goods, and services contributed more to SMEs. Manufacturing represented 20% of the total participation. For the first time since the recession, SME employment grew in 2014 (1.1%). In 2015, SME employment increased by 1.5%. Indeed, following a number of years of poor economic performance, in 2015 EU28 SMEs experienced good growth in value added for the second year in a row (3.8% in 2014 and 5.7% in 2015). According to the EU 28 review analysis from 2016, 99 out of every 100 businesses are SMEs. SMEs employ two out of every three employees and produce 57 cents of every euro in value added.

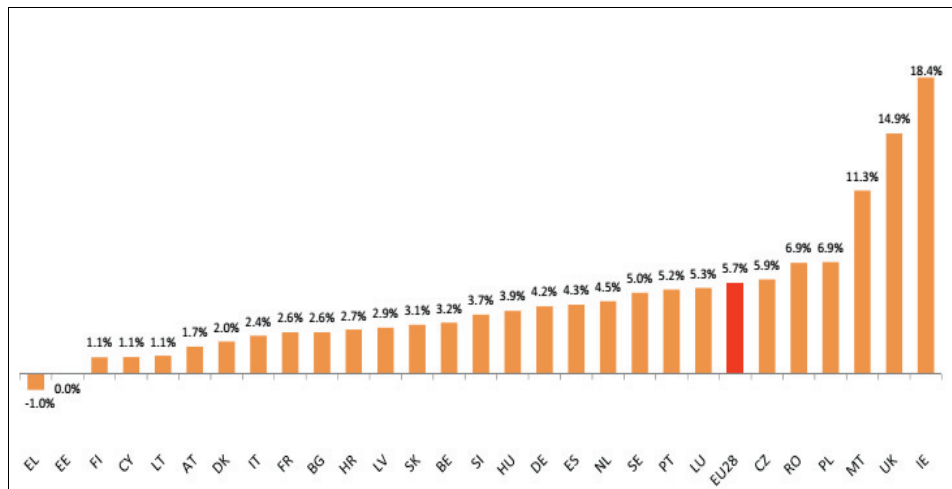


Fig. 2. EU SME value added annual growth by Member State, 2015

Source: Eurostat, National Statistical Offices and DIW Econ, refer the annexure-1 for acronym.

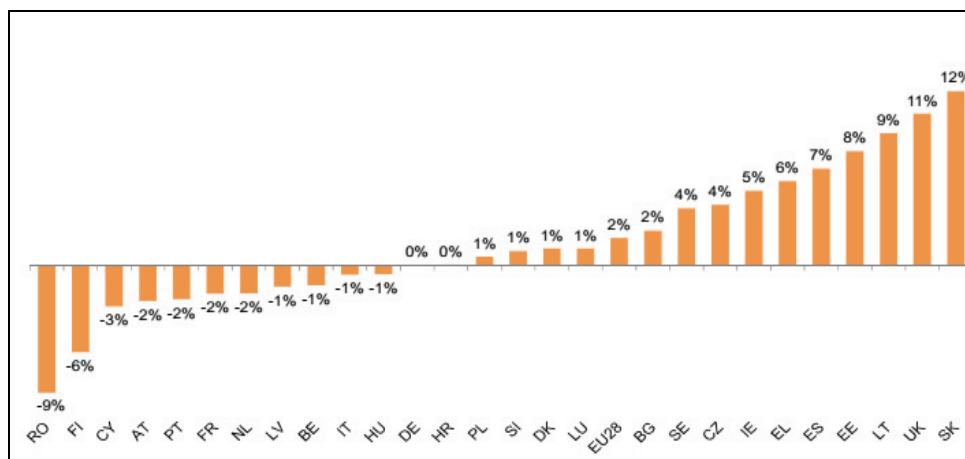


Fig. 3. SME employment growth in the high-tech sector by Member State, 2015

Source: Eurostat, National Statistical Offices and DIW Econ, refer the annexure-1 for acronym.

Figure 2 demonstrates that the value added growth percentage in Ireland, the UK, and Malta was 18.4%, 14.9%, and 11.4% respectively. In the cases of Ireland and Malta, the strong growth in SME value added reflects strong economy-wide growth. According to the European Union, this growth is shown in 'real estate' and 'professional, scientific and technical activities' sectors in Malta while in the case of the UK, the strong growth in value added reflects the sharp uptick of 14.9% in 2015. The next highest growth rate after the top three is 6.9%, recorded by Poland. Therefore, the growth in these three countries was considerably higher than across the rest of the EU28. Hungary has 3.9% average growth, which is less than the average growth of 5.7% of the EU28. In general, the 'manufacturing', 'wholesale and retail trade' and 'other' sectors contributed more to the growth of SMEs and contributed in value added in the non-financial business sector across Member States.

From 2008 to 2013, microindustries contributed more in the SMEs sector; in Hungary, around 489,765 enterprises contributed to SMEs' growth rate. The average percentage of microindustries share is 94.1%, which is greater than the average EU28 member state's of 92.8%. The contribution of small industries is lower – 4.9% compared to the EU28 average of 6%. Hungary has more microindustries but it contributes less in economic value added compared to the average EU28 figure. Hungary's share is 18.1%, while EU28 contribute 21.2% in economic value added.

Table 2. Some short figures about Hungary's SMEs

Class size	Number of enterprises			Number of persons employed			Value added		
	Hungary		EU28	Hungary		EU28	Hungary		EU28
	Number	Share	Share	Number	Share	Share	Billion €	Share	Share
Micro	489 767	94.1 %	92.8 %	861 275	34.4 %	29.5 %	9.6	18.1 %	21.2 %
Small	25 750	4.9 %	6.0 %	479 997	19.2 %	20.2 %	8.6	16.3 %	18.0 %
Medium-sized	4 131	0.8 %	1.0 %	404 644	16.2 %	17.0 %	9.5	18.0 %	18.2 %
<b>SMEs</b>	<b>519 648</b>	<b>99.8 %</b>	<b>99.8 %</b>	<b>1 745 916</b>	<b>69.7 %</b>	<b>66.8 %</b>	<b>27.7</b>	<b>52.5 %</b>	<b>57.4 %</b>
Large	877	0.2 %	0.2 %	757 678	30.3 %	33.2 %	25.1	47.5 %	42.6 %
Total	<b>520 525</b>	<b>100.0 %</b>	<b>100.0 %</b>	<b>2 503 594</b>	<b>100.0 %</b>	<b>100.0 %</b>	<b>52.9</b>	<b>100.0 %</b>	<b>100.0 %</b>

Source: SBA Hungary fact sheet 2016.

Technology-intensive industries including high-tech SMEs have grown rapidly in the 21st century. Technology-intensive companies in these industries need employees with both the technical and managerial leadership skills to ensure their success in this sector of SMEs. In the technology-intensive sector, certain member states experienced particularly high SME employment growth including Lithuania (9%), Slovakia (12%), and the UK (11%). On the other hand, Hungary has -1% growth rate. The overall average of EU28 was positive 1% growth in member states. In total, seven member states posted employment growth of 5% or more in 2015.

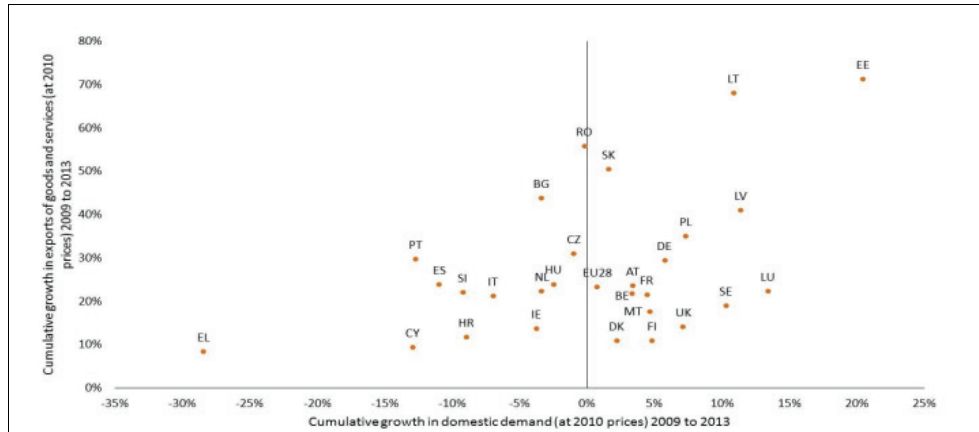


Fig. 4. Cumulative growth in final domestic demand (at 2010 prices) and exports of goods and services (at 2010 prices), 2009-2013

Source: Ameco 2015, refer the annexure-1 for acronym.

Domestic demand and exports that stimulated SMEs' growth have shown the economy in an optimistic way. Another reason for optimism in the economy is the slow economic recovery in EU28 member states. Hungary shows more than 20% of cumulative growth in the export of goods and services. Four countries (EE, LT, SK and RO) showed cumulative growth in exports of goods and services (at constant prices) of 50% and more over the period from 2009 to 2013. Five countries (BG, CZ, LV, PL and PT) posted cumulative export growth (at constant prices) of 30% to 49% over the same period. Ten countries (AT, BE, DE, FR, ES, HU, IT, LU, NL and SL) experienced cumulative export growth (at constant prices) of 20% to 39%. Seven countries (DK, FI, HR, IR, MT, SE and UK) showed growth in exports of goods and services (at constant prices) of 10% to 19%. Only two member states (CY and EL) posted export growth (at constant prices) of less than 10%.

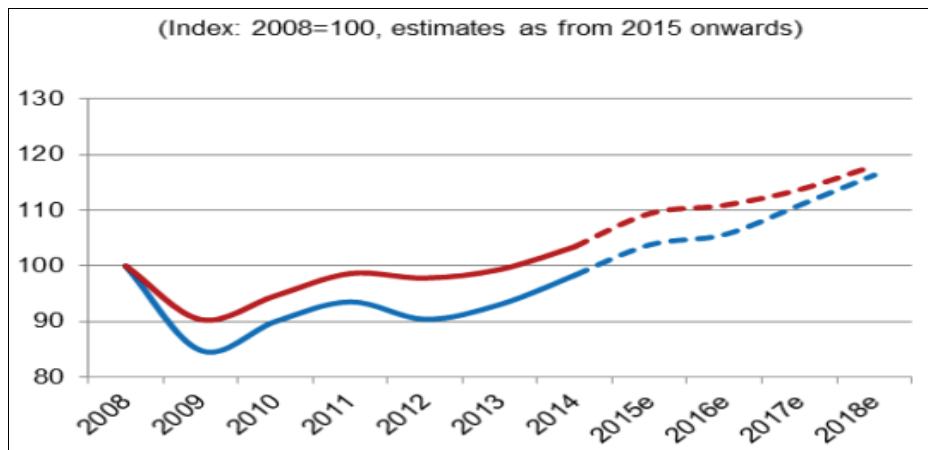


Fig. 5. Value added of SMEs

Source: SBA Hungary fact sheet 2017.

Finance plays the major role in the development of SMEs. The funding scheme is replaced by a market-based lending scheme. Figure 6 shows that Hungarian SMEs are lagging behind as far as the production of EVA is concerned compared to the rest of Europe because of the lack of highly-skilled workers in high-tech sectors, bad financing availability and entrepreneur skills. Increasing the productivity of SMEs requires more entrepreneurs and skilled labour.

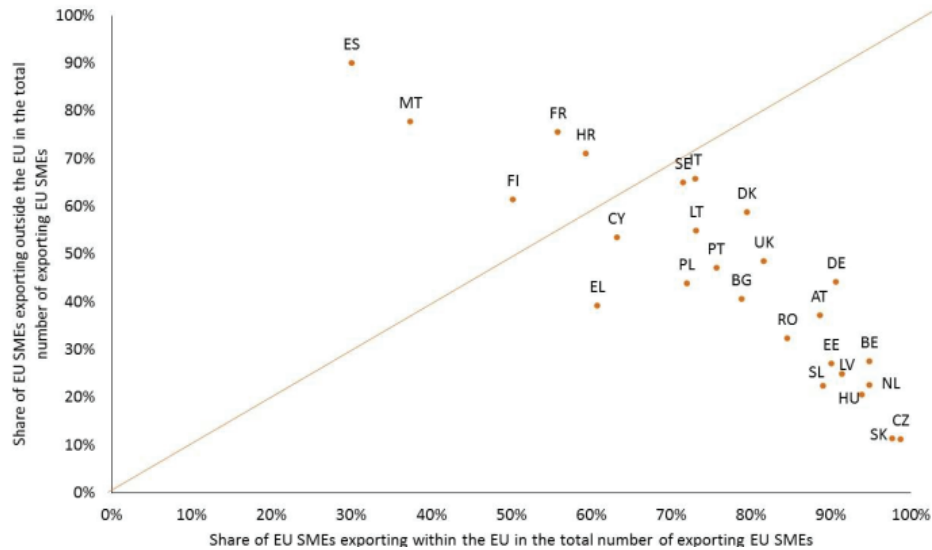


Fig. 6. Percentage of SMEs exporting inside the EU and outside the EU by EU Member State in 2013

Source: Eurostat, London Economics 2015, refer the annexure-1 for acronym.

As demonstrated in Figure 6, some of the EU28 members export more outside Europe. Estonia exports more than 90% outside Europe. Hungary exports more than 90% of goods to the EU28 members states. CZ, SK and NL are top of the list as far as exporting goods within the EU28 members states is concerned.

## Methodology and variable selection

EVA is a useful tool to measure the performance management of SMEs. When EVA concurs with business practice, it influences the firm's result (Moujib Bahri et al., 2010). EVA was analyzed as a useful tool for SMEs performance management. The study indicated that some business has direct impact on EVA, while some practice found EVA insignificant.

Employees of different companies were asked 16 questions. A total of 65 samples were collected for research. A standard sample should be large enough in number to perform the factor analysis. In this research, the Kaiser-Meyer-Olkin value is 0.577, which is greater than 0.50. Thus, we can say that sampling in this research is adequate to perform the factor analysis. Sixteen variables are divided into four EVA components and each economic value component is explained by four questions asked during the survey. The



first two questions are general variables. Questions 3-18 represent variables from V1-V16. EVA components were divided into four different groups of elements: production and equipment, material management, finance and capital as well as sales and purchase. These four variables created economic value added for collected SME samples. SPSS 25.0 is used to analyze the exploratory factor analyses.

## Result analysis and discussion

KMO measures the sampling adequacy, which should be more than 0.5 for a satisfactory factor analysis. Kaiser (1974) recommends 0.5 as the minimum value to analyse research. In this research, the Kaiser-Meyer-Olkin measure of sampling adequacy is 0.577, which is sufficient for the performance. Significant value is 0.000. Bartlett's test of sphericity degree of freedom is 120.

Table 3. Total variance explained

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.391	27.442	27.442
2	1.800	11.248	38.691
3	1.699	10.618	49.309
4	1.292	8.075	57.384
5	1.149	7.178	64.562
6	1.008	6.297	70.859

Source: own research.

Table 3 shows the extracted component variables. The 70.859 percent of variance is explained by the sixth component. The weightage of the first component is 27.442, which contains twelve variables. Variables V4 and V12 have negative contribution in the first extracted component. These variables explain the maintaining and repairing of assets. The further component is cumulative with the other component. Thus, each component has impact on another (see Table 3 and Annex 2 for explanation). Entrepreneur skill and finance have the major impact. In other words, to achieve high growth in SMEs in the Somogy region, policy makers have to solve these two problems and create policies that focus on finance and the high skill development problem. The first component variable is related to the finance and skill condition. To achieve SMEs growth, the situation of finance and high skill development availability in the Somogy county region has to improve.

Table 4. Commonalties and principal component analysis

Variable	<sup>a</sup> Commonalties	<sup>b</sup> Component					
	Extraction	1	2	3	4	5	6
V1	.802	.772					
V2	.625	.713		-.315			
V3	.727	.710			-.374		
V4	.628	-.624	.338				
V5	.670	.613	.462				
V6	.760	.609		.374	-.311	.367	
V7	.916	.602		-.546			
V8	.767	.578	.490			-.408	
V9	.669	.516	-.365				
V10	.767		-.678		-.332		
V11	.756	.314	-.465	.519			
V12	.718	-.383	.388	-.406	.348	.369	
V13	.642			.463	.672		
V14	.752			.485		.521	-.527
V15	.483	.463				.390	.508
V16	.652				.451		.504

a. Extraction Method: Principal Component Analysis. b Extraction Method: Principal Component Analysis.

Source: own research.

As shown in Table 4, commonalties for all the variables are above 0.45, so all variables are sufficient to contribute to research. The commonalties of the seventh variable are the highest among the other variables. The seventh variable is related to the company's effort to get the finance. Finance is the most important variable for Somogy county SMEs. External finance is the main factor preventing the progress of SMEs growth. This is possibly due to the asymmetric information availability (Kim, 1999). The second variable which considerably affects the SMEs industry is the lack of experienced labour. As seen from Figure 4, employment in Hungary's high-tech sector is negative.

Table 4 demonstrates that, in the component matrix, six variables are extracted out of sixteen variables. Variables V1, V2, and V3 are contributed 0.772, 0.713 and 0.710 respectively. The variable value lower than 0.30 is absent from the table. Variables V1, V2 and V3 are related to the skill in the region. Logistic supply and support is dominant in the second component.

## Conclusions

EVA is used as a performance management tool to create value added for the shareholder. However, it does not determine the mindset of the organization, which is another critical determinant measuring future growth. The organization's mindset is important to understand future growth. EVA is useful for company labelling but it is not applicable to the labour and skill conditions and productivity. It gives an overview to

investors of how the organization will behave in the future and whether the business has learnt something from the past mistakes. Hungary's SMEs are experiencing the lack of financing, entrepreneurs and highly-skilled labour. For SMEs to have a progressive future in Europe, another external source of finance and symmetric information about the financial condition of SMEs are necessary. Otherwise, the bank should have to ensure the symmetric information for a documentation file for the financing process of SMEs. A good EVA profile creates good market value. In this research, the results reveal that finance, skilled labour and entrepreneurship are the main determinants which positively influence EVA growth. Finance has the dominant part for the Somogy county region SMEs, which positively affects the other determinants of EVA. A positive approach to providing finance improves the condition of another determinant. Research revealed that a positive approach towards the investor and good, experienced employees is the main role. These key elements are necessary for the growth of SMEs.

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