

# International Journal of Management Cases

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Investigating SME's strategic approach in the context of Internationalization and Organizational Capabilities in the German MedTech Industry

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## Implementation of the measures from the Reform Agenda for B&H 2015-2018 in the Central Bosnia Canton

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### Abstract

*In Bosnia and Herzegovina, there is a political consensus on joining the European Union. However, in practice, this political consensus has constantly encountered obstacles, and since 1997, when the Council of Ministers of the European Union has set up political and economic conditions for the development of bilateral relations, by 2014, it felt slowdown on the European road in B&H.*

*Acting on the initiative of the EU's Foreign Affairs Council in December 2014, all levels of government in B&H adopted a document entitled "Reform agenda for B&H 2015-2018".*

*In the Reform Agenda for B&H 2015-2018. The Council of Ministers of Bosnia and Herzegovina, the Government of the Federation of Bosnia and Herzegovina, the Government of the Republic of Srpska and the governments of all ten cantons and the Government of the Brčko District recognize the urgent need to launch a process of recovery and modernization of the economy in order to strengthen a sustainable, efficient, socially just and stable economic growth, job creation, increases and better targeted distribution of social benefits, and the creation of a sustainable and equitable social environment. Specific actions aimed at fiscal and financial sustainability and socio-economic reform will be complemented by targeted measures to strengthen the rule of law and the fight against corruption, strengthening administrative capacities and increasing the efficiency of public institutions at all levels of government.*

*The Government of the Central Bosnia Canton has at its session of 15.10.2015. adopted the CBC Action Plan for Implementation of the Reform Agenda for B&H for the period 2015-2018. The Action Plan contains 50 measures and their implementation expected progress in the areas already mentioned.*

*This paper will show the situation before the Reform agenda and the latest data on economic growth and job creation in the area of the Central Bosnia Canton.*

*Keywords: Reform agenda for B&H 2015-2018, Central Bosnia Canton, economic growth, job creation.*

### Introduction

Bosnia and Herzegovina achieved its independence after the referendum was conducted on 29. February until 1. March 1992. years. After the proclamation of independence, an aggression was carried out that was ended by the signing of the so-called "Dayton Peace Agreement" in December 1995.

As a country in the southeastern European continent, it has naturally aspired to membership in the European Union. There is consensus among all relevant political

parties for membership in the European Union, although this consensus, in some years, is more declarative than it is actually present in the work of policy makers.

The bilateral relationship between Bosnia and Herzegovina and the European Union, according to the Directorate for European Integration of Bosnia and Herzegovina ([http://dei.gov.ba/dei/B&H\\_eu/default.aspx?id=9808&langTag=en-US](http://dei.gov.ba/dei/B&H_eu/default.aspx?id=9808&langTag=en-US)), began in 1997 when the Council of Ministers of the European Union set political and economic conditions for the development of bilateral relations, allowing Bosnia and Herzegovina to use autonomous trade preferences.

The following events were particularly important in bilateral relations between Bosnia and Herzegovina and the European Union:

- In May 1999, the Stabilization and Association Process started, which offers a clear possibility of integration for Bosnia and Herzegovina as well as the other five Western Balkan countries in the EU.
- In March 2000, the EU Road Map was published. This document outlined 18 key conditions that Bosnia and Herzegovina needs to meet in order to address the feasibility study for Stabilization and Association Agreement (SAA) negotiations.
- On June 1st 2015, the Stabilization and Association Agreement between the EU and Bosnia and Herzegovina entered into force.
- On February 15th 2016, pursuant to Article 49 of the Treaty on European Union, Bosnia and Herzegovina submitted a formal "application for membership in the European Union" within the framework of the Dutch Presidency of the Council of the European Union.
- On September 20th 2016, the Council of the European Union invited the European Commission to prepare an opinion on Bosnia and Herzegovina's application for EU membership.
- On December 9, 2016, the Questionnaire of the European Commission was presented.
- On February 28, 2018, Bosnia and Herzegovina's Response to the European Commission Questionnaire was officially handed over to Jean-Claude Juncker, President of the European Commission

### **Reform agenda for Bosnia and Herzegovina 2015 - 2018**

Prior to independence, Bosnia and Herzegovina was part of the Socialist Federal Republic of Yugoslavia and, together with other republics of that country, had communist state organization with planning economy.

Before independence, the process of transition to capitalism began, and this process continued after the end of the 1995 war. So, Bosnia and Herzegovina has become one of the countries in transition.

The process of transition or transition from one social system to another has had its ups and downs, and one of the conditions for joining the European Union is the existence of a market economy in the country. After it became clear that the "European path" in Bosnia and Herzegovina was stagnating and acting on the basis of the initiative of the EU's Foreign Affairs Council from December 2014, all levels of government in B&H adopted a document entitled "Reform agenda for B&H 2015-2018".

In the Reform Agenda for B&H 2015 to 2018, the Council of Ministers of Bosnia and Herzegovina, the Government of the Federation of Bosnia and Herzegovina, the Government of Republic of Srpska and the governments of all ten cantons and the Government of Brčko District recognize the urgent need to launch a process of recovery and modernization of the economy in order to strengthen a sustainable, socially just and stable economic growth, job creation, increased and better targeted allocation of social benefits and the creation of a sustainable and just social environment. Concrete actions aimed at fiscal and financial sustainability and socio-economic reforms will be complemented by targeted measures to strengthen the rule of law and fight against corruption, strengthen administrative capacities and increase the efficiency of public institutions at all levels of government.

The key areas covered by the Reform Agenda are divided into six areas:

1. Public finance, taxation and fiscal sustainability,
2. Business climate and competitiveness,
3. Labor market,
4. Reform of social protection and pensions,
5. The rule of law and good governance.
6. Public administration reform.

In a decentralized state such as Bosnia and Herzegovina, the most important is the knowledge of constitutional jurisdiction, or who has constitutional jurisdiction over certain areas to regulate it by laws and subordinate acts.

When we look at the previous six areas from the Reform Agenda, we will see that some of the cantons, including the Central Bosnia Canton, have no jurisdiction, while some other areas are in joint jurisdiction with the Federation of B&H, and some may be independently edit. It is clear that, in cases where there is no jurisdiction, the cantons have not even tried to make a step forward, while in the areas of their exclusive competence and those jointly with the Federation of Bosnia and Herzegovina, they are an area of interest of the cantons.

In the area of public finances, cantons prescribe laws in the field of taxation, inheritance and real estate purchase. Cantons take into account the sustainability of cantonal and municipal budgets. Business climate cannot be specially edited, as well as competition, but can try different incentive measures to help the development of business climate.

In the labor market, cantons have no legislative competencies but are competent for the Employment Bureau and Employment Services, they can actively support the employment of unemployed people.

In the area of social protection, Cantons apply the regulations of the Federation of B&H, primarily in the field of retirement, while in the field of social policy may have cantonal regulations.

The rule of law and good governance is the area in which the cantons have their jurisdiction, primarily through the organization of the judiciary and the enforcement of the law at cantonal level.

In the reform of the public administration, the cantons were given jurisdiction, as the FB&H Civil Service Act was declared unconstitutional in certain provisions, and thus the cantons were given the authority to adopt their own civil service laws themselves and on the basis of the same attempt to reform public administration.

### **Central Bosnia Canton**

Territorial arrangement of Bosnia and Herzegovina is regulated so that within Bosnia and Herzegovina there are two Entities and the Brcko District. One entity has a highly centralized organization (Republic of Srpska), while the entity of the Federation of Bosnia and Herzegovina is decentralized and has ten cantons. Central Bosnia Canton is one of ten cantons.

The Central Bosnia Canton covers an area of 3,189.3 km<sup>2</sup> and is one of the largest cantons in the Federation of Bosnia and Herzegovina, occupying 12.21% of the territory of the Federation of Bosnia and Herzegovina. There is a Legislative Authority in the Central Bosnia Canton made by the Assembly of the Central Bosnia Canton with 30 representatives elected in the general elections. According to the Constitution of the Central Bosnia Canton, the executive is the Government of the Central Bosnia Canton, which has a prime minister and eight ministers, four Bosniaks, four Croats and one Serb.

### **Development Index of Federation of B&H and Canton**

The Federal Institute for Development Programming each year on the basis of statistical data makes document "Socioeconomic Indicators by Municipalities in the Federation B&H". The purpose of the document "Socioeconomic Indicators by Municipalities in the Federation of Bosnia and Herzegovina 2016" is to consider the basic socio-economic development indicators of the FB&H by municipalities and to rank local communities according to the level of development.

This paper deals with: population density, population structure in 1991, population in FB&H, active population, natural increase, employment rate, unemployment rate, unemployment by vocational education, unemployed women according to vocational education, salaries, number of pensioners, average pensions, foreign trade FB&H by municipalities in the previous year, income, agricultural area, parks and gardens, forest land, transport infrastructure, elementary education, secondary education, health and business structure. When determining the aggregate development index of each municipality in the Federation of Bosnia and Herzegovina (and subsequently the canton), the following indicators were used:

- the level of employment of the population,
- the level of unemployment of the population,
- number of primary and secondary school students per 1000 inhabitants,
- absent population in relation to 1991 census and
- tax revenues per municipality per capita.

The level of employment was determined on the basis of data on the number of employees per municipality in relation to the working-age population. The unemployment rate was determined on the basis of data on the number of unemployed by municipalities in relation to the working active population. The absent



population was determined based on the number of inhabitants per municipality in relation to the 1991 census in the municipalities that belonged to the Federation of B&H under the Dayton Agreement. The number of students per 1000 inhabitants was determined on the basis of estimates of the number of inhabitants' present. Development indicators (employment rate, unemployment rate, number of pupils and absentee population) were made on the basis of official statistical data and the indicator of tax revenues per municipality was made on the FB&H Tax Administration database.

### Development index of Central Bosnia Canton before 2015

Based on this defined methodology, the development index of the municipalities in the Federation of Bosnia and Herzegovina and the cantons development index was established. The Canton Development Index is given in the following table for the years that preceded the Reform Agenda and from it can be seen the relative position of cantons within the Federation.

**Table 1: Cantonal development index in the Federation of Bosnia and Herzegovina**

Canton	2011	2012	2013	2014				
	Ind ex	Ran g	Ind ex	Ran g	Ind ex	Ra ng	Ind ex	Ra ng
Sarajevo Canton	137,8	1	138,5	1	138	1	138,6	1
West Herzegovina Canton	115,8	2	116,3	2	115,3	2	115,1	2
Herzegovina-Neretva Canton	105,4	3	106,3	3	106,9	3	107	3
Tuzla Canton	101,6	4	101,6	4	101,5	4	101,1	4
Zenica-Doboj Canton	93,1	5	92	5	92,1	5	91,9	5
Bosnian-Podrinje Canton	87,3	6	90,7	6	91,3	6	91,8	6
<b>Central Bosnia Canton</b>	<b>77,9</b>	<b>7</b>	<b>78,1</b>	<b>7</b>	<b>78,1</b>	<b>7</b>	<b>78,5</b>	<b>7</b>
Una-Sana Canton	77,8	8	77,3	8	77,5	8	76,9	8
Canton 10	61,9	9	66,2	9	60,6	9	60,3	9
Posavina Canton	57,6	10	59,8	10	57,8	10	56,8	10

It is evident from the table that the Central Bosnia Canton was the seventh in the Federation of Bosnia and Herzegovina. Developed of the cantons are: Sarajevo Canton, Western Herzegovina Canton, Herzegovina-Neretva Canton, Tuzla Canton,

Zenica-Doboj Canton and Bosnian-Podrinje Canton. Cantons with a poor index of development are Una-Sana Canton, Canton 10 and Posavina Canton.

In addition to these data, the relevant data showing the development of Central Bosnia Canton are also from the Federal Statistical Office publication. Thus, the document "Central Bosnia Canton in figures" provides data on the number of business entities, the number of employees, the average salary etc.

On the basis of these documents, a table was presented showing the following situation in the Central Bosnia Canton:

**Table 2: Macroeconomic Indicators for Central Bosnia Canton**

	2011	2012	2013	2014
Number of citizens	254.003	253.592	253.149	252.573
Number of unemployed	39.030	40.356	41.711	41.804
Number of employed	39.017	38.719	38.975	40.745
Registered business entities	4.101	4.304	4.400	4.530
Registered crafts	6.272	6.232	6.160	6.210
Average net salary KM	675	708	698	678

From the above presented, it is evident that the Central Bosnia Canton was one of the underdeveloped cantons in the Federation of Bosnia and Herzegovina, with the unfavorable employment/unemployment ratio, low average net wage, and the population whose number was decreasing. The number of business entities grew with a weak intensity.

### **Reform agenda in the Central Bosnia Canton**

Based on the initiative of the European Union Foreign Affairs Council and adoption of the Reform Agenda, the Government of the Central Bosnia Canton adopted its Action Plan for the Reform Agenda for Bosnia and Herzegovina for the period 2015-2018 at its meeting on 15 October 2015. The Action Plan contains 50 measures whose implementation would meet the requirements of the Reform Agenda. These measures are listed in Table 3:

**Table 3: Central Bosnia Canton Action Plan for the Implementation of the Reform Agenda 2015-2018**

No	Activity	Institutional carrier	Indicative time limit
1	Fight against corruption	Ministry of Interior, Canton Government	Continuously
2	Fight against terrorism	Ministry of Interior, Canton Government	Continuously
3	Fight against organized crime	Ministry of Interior, Canton Government	Continuously
4	Necessary implementation of fiscal consolidation of the CBC Budget; ie revenues and expenditures. Balancing budget items in order to reduce budget deficits, reduce public spending (increase public revenues by reducing gray economy and reducing tax exemptions)	Government CBC; Ministry of Finance, All budget users	By the end of 2016
5	Implement the public administration reform at the higher levels of government, and implement a reform at CBC level where a special segment will be a reduction in the number of employees of all budget users (administrative bodies, health, education and other institutions), and strict employment controls	The Government of CBC, Ministry of Justice and Administration	
6	Make a plan for resolving the status of economic entities with majority state capital in the area of the CBC, which for a long time show a loss in business - by continuing the accelerated privatization process of the remaining part of state capital or opening bankruptcy proceedings	the Ministry of Economy, Privatization Agency	

7	Providing a more favorable environment for investing in the area of CBC by initiating and implementing the following priorities: amendments to the regulations governing the registration (opening of new businesses), short registration deadlines, reduction of registration fees (notarial services, fees) and reduction of the number of necessary documents for registration	Government CBC, Ministry of Economy, Ministry of Agriculture, W a t e r Management and Forestry, Ministry of P h y s i c a l Planning, Ministry of Finance	First half of 2016.
8	Work on better and more efficient exploitation of existing natural and other resources in the area of the CBC	Ministry of Economy Ministry of Agriculture, W a t e r Management and Forestry, Ministry of P h y s i c a l Planning, Ministry of Finance	Continuous
9	Direct activities to reduce rates for compulsory health insurance	Ministry of Health and Social Policy, Ministry of Finance	
10	Health System Reform Strategy	Ministry of Health and Social Policy, Institute for H e a l t h Insurance and Public Health Institute	Continuous
11	Harmonization of the cantonal law on health protection with federal law	The Ministry of Health and Social Policy, Government of Canton	2016. g.
12	Adoption of the law on taking over founding rights over the cantonal hospitals	Ministry of Health and Social Policy, C a n t o n Government	Continuously

13	Amendments to the Cantonal Law on Social Welfare, Care of Civil Victims of War and Care of the Family with Children	Ministry of Health and Social Policy, Government of the Canton	After amendments to the federal law
14	Improving targeted social protection and establishing a centralized database of social welfare beneficiaries	Ministry of Health and Social Policy, Government of the Canton	The third quarter of 2016
15	Introduction of the treasury system into the health sector	Ministry of Health and Social Policy, Government of Canton, Health Insurance Institute Continuous	2016
16	CBC Framework Program Document for 2016-2018	Ministry of Finance	2015
17	Public Investment Program for the period 2016 – 2018	Ministry of Finance	2015
18	CBC Budget for 2016	Ministry of Finance	2015
19	Cash Flow Plan	Ministry of Finance	2015
20	Continue on activities to amend the Law on Public Revenue in FB&H	Ministry of Finance	Continuously
21	Amendments to the Decree on Types of Own Revenues, and on the Method and Terms of Their Allocation	Ministry of Finance	March 2016.
22	Establish budgetary supervision and establish budget inspection through reorganization of employees	Ministry of Finance	December 2016
23	Drafting of the "Strategy for the Development of Education in CBC"	Ministry of Education, Science, Culture and Sports	2016-2018
24	Adoption of the Law on Vocational Education	Ministry of Education, Science, Culture and Sports	2015-2016

25	Adoption of the Law on Adult Education	Ministry of Education, Science, Culture and Sports	2015-2016
26	Adoption of the Law on Pre-school Education	Ministry of Education, Science, Culture and Sports	2015-2016
27	Adoption of the Law on Primary Education	Ministry of Education, Science, Culture and Sports	2016-2018
28	Adoption of the Law on Secondary Education	Ministry of Education, Science, Culture and Sports	2016-2018
29	Adoption of the Law on Scientific and Research Activities	Ministry of Education, Science, Culture and Sports	2016-2018
30	Introduction of external maturity through EMIS	Ministry of Education, Science, Culture and Sports	2016-2018
31	Adoption of pre-school criteria for pre-school education and primary and secondary education	Ministry of Education, Science, Culture and Sports	2016-2018
32	Establish enrollment policy in elementary and secondary schools in the canton	Ministry of Education, Science, Culture and Sports	2016-2018
33	Identify the proposal of the network of primary and secondary schools in CBC	Ministry of Education, Science, Culture and Sports	2016-2018
34	Adoption of innovated curricula for vocational education, defined on learning outcomes	Ministry of Education, Science, Culture and Sports	2016 - 2018

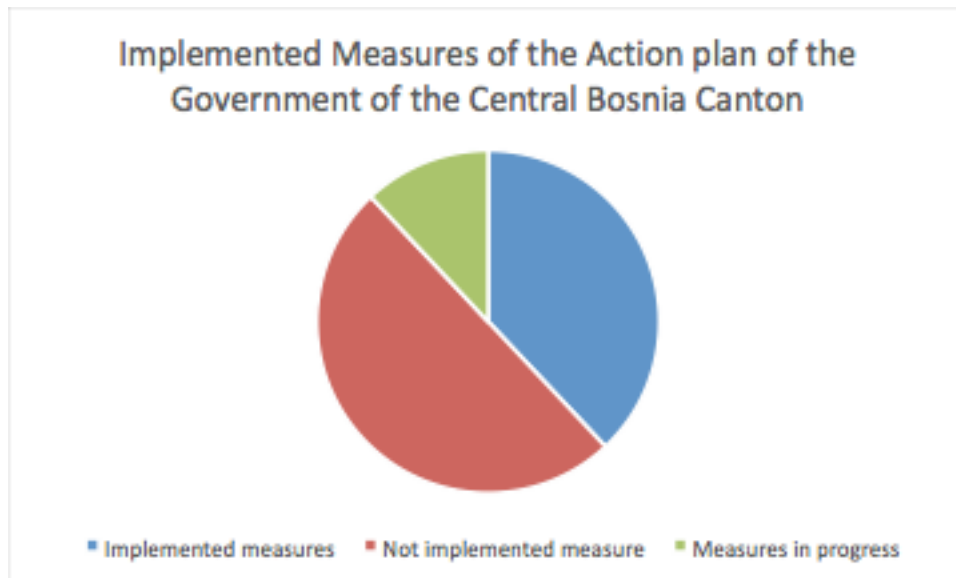
35	Forest development strategy in the area of CBC	Ministry of Agriculture, Water Management and Forestry	After the adoption of the Forest Development Strategy in FB&H
36	Medium-Term Strategy for Agriculture and Rural Development CBC	Ministry of Agriculture, Water Management and Forestry	November 2016
37	Agricultural Land Management Strategy	Ministry of Agriculture, Water Management and Forestry	November – December 2016
38	Law on Amendments to the Water Act	Ministry of Agriculture, Water Management and Forestry	November – December 2016
39	Reduction and simplification of the procedure for issuing a building permit	Ministry of Physical Planning, Construction, Environmental Protection, Return and Residential Affairs	2016
40	Legalization of Illegally Built Buildings	Ministry of Physical Planning, Construction, Environmental Protection, Return and Residential Affairs	2015-2016

41	Revision of projects	Ministry of Physical Planning, Construction, Environmental Protection, Return and Residential Affairs	2016
42	Buildings and requirements of importance for the Canton	Ministry of Physical Planning, Construction, Environmental Protection, Return and Residential Affairs	2015
43	Reform of the judicial system through activities at the level of B&H and FB&H	Ministry of Justice and Administration	Continuous
44	Draft Law on the Ombudsman	Ministry of Justice and Administration	December 2015 I quarter 2016
45	Draft law on court fees	Ministry of Justice and Administration	I quarter 2016
46	Draft Law on Free Legal Aid	Ministry of Justice and Administration	I V quarter 2016
47	Draft Law on Civil Servants	Ministry of Justice and Administration	I quarter 2016
48	Draft Law on Employees in the CBC	Ministry of Justice and Administration	I quarter 2016
49	Draft Law on Inspections in the CBC	Ministry of Justice and Administration	I quarter 2016
50	Reorganization of cantonal bodies	Ministry of Justice and Administration	I quarter 2016

These measures are being implemented from 15 October 2015. - 28 February 2018 and a total of 19 measures have been implemented while six measures are ongoing. Unfortunately, there are still 25 unimplemented measures from the Action Plan.



**Chart 1: Implemented Measures from the Action Plan of the Government of the Central Bosnia Canton**



In addition to the measures outlined in the previous table, the higher authorities, the Council of Ministers of Bosnia and Herzegovina and the Government of the Federation of Bosnia and Herzegovina have also adopted the Action Plans under their jurisdiction. Measures taken at these levels of government have its consequences at lower levels, so all that the higher levels of government worked directly affected the situation in the Central Bosnia Canton. According to the document "State of the Nation Vol. 5" prepared and issued by the Center for Civil Initiatives (September 30, 2017), it is evident that the Action Plan for Implementation of the Reform Agenda at the level of Bosnia and Herzegovina contains 37 measures and that 21 were implemented, 12 were in the implementation procedure, while only four measures were not implemented.

The same document presents the situation for the Federation of Bosnia and Herzegovina, and it is apparent that the Action Plan of this level of government has 59 measures, of which 24 have been implemented, 14 in the procedure of implementation, while 21 measures have not been implemented.

### **Development Strategy of the Central Bosnia Canton**

In parallel with the adoption of the Action Plan for Implementation of Measures from the Reform Agenda for the Central Bosnia Canton, the Central Bosnia Canton Government prepared and adopted the Development Strategy of the Central Bosnia Canton 2016-2020.

The Development Strategy identified three priority objectives:

- Strengthen the economic sector through sustainable use of available resources, natural resources, heritage and traditions;
- Improve the quality of life and a sustainable social environment;
- Improve infrastructure, communal services and the state of the environment.

The Development Strategy of the Central Bosnia Canton has a total of 173 projects divided by strategic goals (64, 72 and 37 respectively), total value 135.300.000KM (71.560.000KM, 29.800.000KM, 33.940.000KM respectively).

The term enactment of the Development Strategy of the Central Bosnia Canton as well as the term enactment of the Reform Agenda coincides with the election cycle in Bosnia and Herzegovina since the general elections were in October 2014 and the establishment of governments at all levels occurred just before the adoption of the Reform Agenda as well as the Development Strategy. This was a great opportunity for governments to start the next four-year cycle with concrete activities aimed at making progress on the European path as well as socioeconomic development.

### **Central Bosnia Canton after the implementation of the Reform Agenda and the Development Strategy**

After the implementation of the Measures from the Action Plan for Implementation of Measures from the Reform Agenda and Work on the Priority Goals of the Development Strategy of the Central Bosnia Canton, we can see that some progress has been made. This progress can be seen from the "Canton Development Index", as well as data processed by the Federal Bureau of Statistics.

**Chart 1: Central Bosnia Canton Development Index 2011 - 2016**

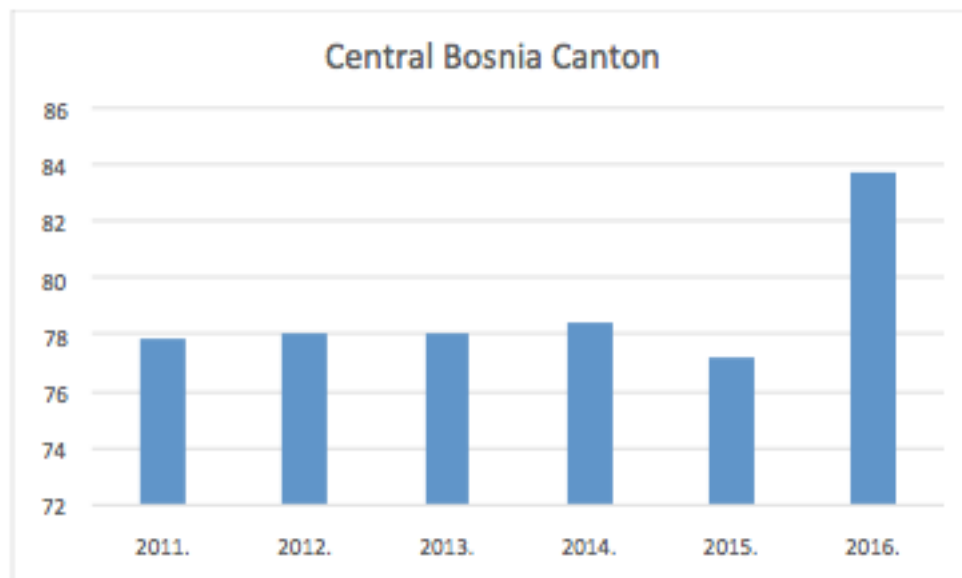


Table 4: Canton Development Index After Two Years of Reforms

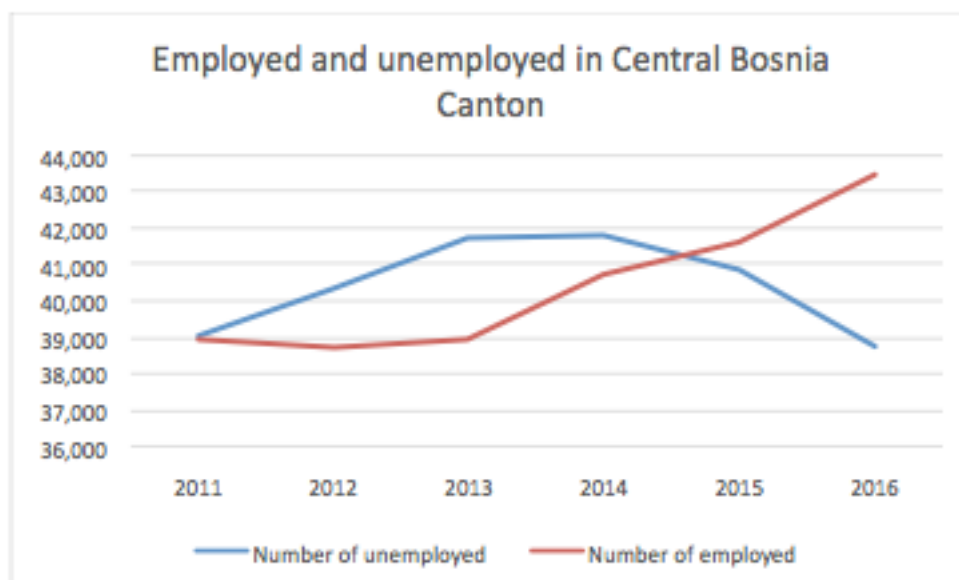
Canton	2011	2012	2013	2014	2015	2016						
	Index	R	Index	R	Index	R	Index	R	Index	R	Index	R
Sarajevo Canton	137,8	1	138,5	1	138	1	138,6	1	138,4	1	136	1
West Herzegovina Canton	115,8	2	116,3	2	115,3	2	115,1	2	124,5	2	122,1	2
Herzegovina-Neretva Canton	105,4	3	106,3	3	106,9	3	107	3	110,4	3	110,4	3
Tuzla Canton	101,6	4	101,6	4	101,5	4	101,1	4	99,8	4	93,7	4
Zenica-Doboj Canton	93,1	5	92	5	92,1	5	91,9	5	93,4	5	92,1	6
Bosnian-Podrinje Canton	87,3	6	90,7	6	91,3	6	91,8	6	86,3	6	92,9	5
<b>Central Bosnia Canton</b>	<b>77,9</b>	<b>7</b>	<b>78,1</b>	<b>7</b>	<b>78,1</b>	<b>7</b>	<b>78,5</b>	<b>7</b>	<b>77,2</b>	<b>7</b>	<b>83,7</b>	<b>7</b>
Una-Sana Canton	77,8	8	77,3	8	77,5	8	76,9	8	75,4	8	76,1	8
Canton 10	61,9	9	66,2	9	60,6	9	60,3	9	57,5	9	66,3	10
Posavina Canton	57,6	10	59,8	10	57,8	10	56,8	10	51,2	10	67,6	9

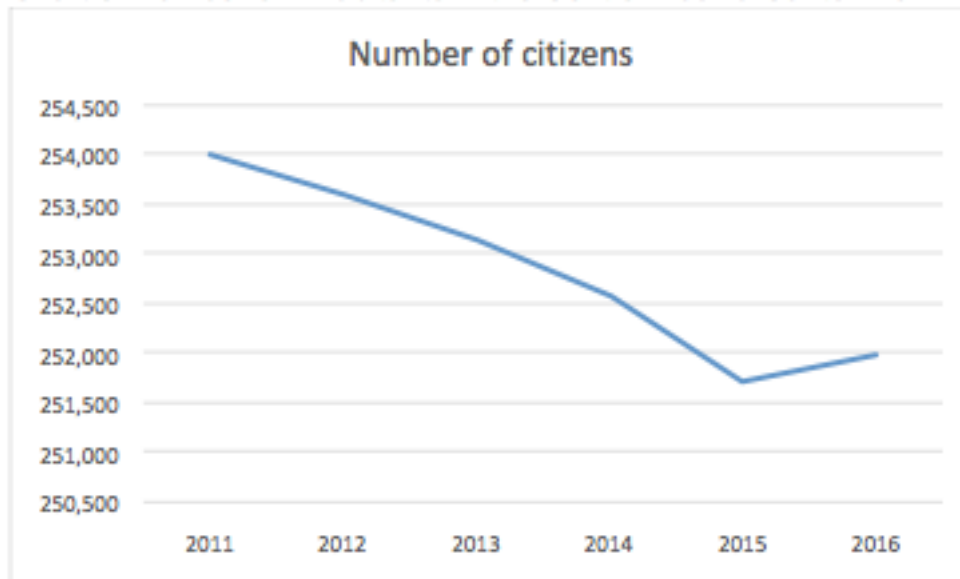
From Table 4 and Chart 1 it is clear that the Central Bosnia Canton, after implementing measures under the Reform Agenda (which is within the competence of the Canton and State level as well as Federal level), as well as the Development Strategy for the Central Bosnia Canton 2016-2020, achieves an improvement of 6.5 index points, is still far to move to position number six.

Other indicators from the Federal Bureau of Statistics show progress, above all in employment, the number of business entities and the preservation of the population. The only indicator that is down is the number of registered trades.

**Table 5: Macroeconomic Indicators for Central Bosnia Canton After Reform**

	2011	2012	2013	2014	2015	2016
Number of citizens	254.003	253.592	253.149	252.573	251.714	251.973
Number of unemployed	39.030	40.356	41.711	41.804	40.848	38.748
Number of employed	39.017	38.719	38.975	40.745	41.615	43.474
Registered business entities	4.101	4.304	4.400	4.530	4.659	4.821
Registered crafts	6.272	6.232	6.160	6.210	6.249	5.404
Average net salary KM	675	708	698	678	673	678

**Chart 2: Ratio between the number of employed and unemployed in Central Bosnia Canton 2011-2016**

**Chart 3: Number of inhabitants in the Central Bosnia Canton 2011-2016**

## Conclusion

Measures from the Reform Agenda that the Government of the Central Bosnia Canton has turned into the Action Plan in conjunction with the Development Strategy of the Central Bosnia Canton and measures implemented by higher levels of government in Bosnia and Herzegovina can lead to progress in key sectors such as employment, population conservation, and economic growth.

The work on the Reform Agenda, in fact the measures adopted through the action plans, was not particularly successful, taking into account the percentage of realized measures. More than the commitment of all levels of government and the implementation of all proposed measures through action plans would lead to a better socioeconomic situation in Bosnia and Herzegovina.

A number of measures that can be taken at the municipal level and within a new Reform Agenda as well as some new measures at cantonal, entity and Bosnia and Herzegovina levels will lead to even stronger growth and development.

Thus, the fulfillment of all or most of the measures from the Action Plans for the Reform Agenda for Bosnia and Herzegovina 2015-2018 and the adoption of the new Reform Agenda for Bosnia and Herzegovina 2018-2022 and new action plans, including municipalities and cities, would contribute to the development of municipalities, cities, cantons, entities and Bosnia and Herzegovina as a whole.

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Službene novine Srednjobosanskog kantona 1/97, 5/97, 6/97, 2/98, 7/98, 8/98, 10/00, 8/03, 2/04, 14/04

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## Features of organizations as a determinant building competitive advantage of companies

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### Abstract

*Changing business conditions and intensifying competition on the market force companies to continuously search for new sources of competitive advantages. The companies have been finding new ways of creating values by turning to internal organizational strengths. The main goal of this study is to analyze and explain the process of organizational capabilities for development by exploring the role of organizational design through the development of dynamic capacities. Characteristics of organizational design determine the organizational possibilities for effective use of the existing resources and shape organizational capabilities in a way that allow it to effectively respond to environmental opportunities and also facilitate the implementation of particular strategy. The results of research indicate that they predominantly represent traditional, inflexible organizational structure in companies in Bosnia and Herzegovina (BiH). The enterprises take into account the cost and quality of the products as dominant source of competitive advantage. Based on the statistical method for analysis of business environment, it determines all the relevant factors which contribute to the improvement of general business climate of small, medium and large companies, although they are rarely applied in practice. In conclusion of the study it is suggested that the results of the statistical test (Kruskal-Wallis Test) have no impact / connections between the construction of sustainable competitive advantage (from the one side), and the organizational structure of the companies and its business strategy (on the other side), or does not confirm the hypothesis: „The scientific knowledge about the competitive advantages of companies observed through the prism of the characteristics of the organization, or the organizational structure, leads to the assumption, that the construction of a sustainable competition advantage of companies determined by the relationship between the organizational structure of the company and of his business strategy.“*

*Keywords: small, medium and large companies, business strategy, organizational structure, sources of competitive advantages, Bosnia and Herzegovina.*

### Introduction

Companies in the new business environment must strive for the top and business excellence. The key to successful business operations is to establish and maintain competitive advantage on the market. "How to survive on the market" is the question that companies ask themselves, ie "How to be competitive in unsafe conditions"? Creating and maintaining competitive advantage is the basic and toughest task for the contemporary companies. Establishing relationships between companies and environment managers realized using strategic management. For the company it is necessary to define its own strategy that will be different from others. Strategy, which

supports innovation, continuous improvement, strengthen the overall system of values and a global approach.

It is not enough just to develop a strategy, but to implement and monitor it. Efficiency and effectiveness, product quality, innovation and customer-orientation are important elements in building a competitive advantage. For companies it is necessary to recognize that success is defined by the organizational abilities which the company owns. There is a need for research sources of competitive advantages of companies in Bosnia and Herzegovina, viewed through the prism of the characteristics of the organization. The main goal is to look at the impact that organizational structure build as competitive advantage. The aim is to explore the extent to which the organizational structure of the companies will be the subject of research according to the strategy of the company and its competitive advantage.

For BiH companies it is of great importance to build long-term competitive advantage. To achieve this, it is necessary for the organization and its structure to be in line with the business strategy based on what the company wants to build as its own competitive advantage. The purpose of this paper is to identify the fundamental features of the organizational structure of BiH companies, and compliance with business strategy and the foundations of a competitive advantage.

### **Theoretical discussion**

The strategy of the company is from one side the area in which the company operates, and on the other hand, it is the reason of its existence. According to the authors Krstić, I. Becić, S. (2012, p. 118) „Business operations under modern conditions are under great influence of changes in the environment, which are reflected in the strategic thinking and reaction of the company. The company between the competitors must have a flexible strategy, which is reflected in making tactical decisions in the course of implementation of the strategy. These decisions represent adaptation of the strategy and changes in the environment during the process of its implementation. The implementation of the strategy that the company seeks is to maximize competitive advantage while minimizing any disadvantages compared to competitors.“

Competitiveness is the foundation that determines the success or failure of the company. Competitiveness determines the suitability of the activities in companies such as innovation, organizational structure, organizational culture or good implementation. The company has a competitive advantage when it is able to create more economic value than its rivals, that is, to create added values that competitors can not imitate. The traditional sources of competitive advantage such as products, technologies, markets and productional process are not sufficient. Many traditional sources of competitive advantage are easy for competitors to imitate. Competitive advantage is related to the possession of valuable resources that allow the company better or cheaper to carry out business activities of competitors. The expansion of the economic changes in the world shows us that innovation ability, knowledge, and intergrated education, research and entrepreneurship represents a level of a society that allows fast adaptation to all new changes in a society. The innovation ability of the company enables competitive advantage and economic growth to be followed by fast and successful economic activities. It is not enough to achieve the current competitive advantage, but it is necessary that advantage and position will be held in the future.



Components competitive advantage in the modern business conditions are:

- Operational efficiency of the company - as a standard of market competition and
- strategy - as a presumption of long-term survival of a company,

since it is based on the identification of sources, and build and sustain of competitive advantage.

According to the author Porter, M. (2005, p.14) „The strategy of the company is what makes the company unique, giving it a distinct competitive advantage, provides direction, build brand reputation, sets the right goals, provides an above average performance, defines the market position and creates a unique system of values“. The purpose of business strategy is to create a common focus within and outside the company.

A representative key for the design of organization is actually the structure of the company, because of its importance to the company, is also called by some authors the anatomy of the company. This underlines the organizational structure of the company as anatomical material for living organisms.

According to the authors of the book Krstić, I. and Becić, S. (2012, p.118) „there is a double link between competitive advantage and enterprise strategy. Firstly, building competitive advantage determines the strategy of the company. Secondly, the strategy the company determine should be developed to achieve the objectives. Strategic intent sets a goal that requires personal effort and commitment to be a leading company in the business“.

The company establishes the organizational structure of the connection to ensure that the process of managing organizational culture is supported by smooth functioning. The purpose of the organization of the company is to implement all what is planned. Hence, the correlation between planning / strategy and organization that acts as an instrument for achieving the plan in practice is established.

According to the authors Bistričić, A. (2006) "The strategy and organizational structure of the business system are mutually connected interactively. In addition to the organizational structure and processes for successful realization of the strategy of the business system is important and coherence between strategy and organizational culture of the business system. Realizing strategy goes over operations and employees can decide for themselves, whether to when solving everyday problems take into account the strategic orientations or not“. It is important for each strategy to require a certain manner of strategic behavior and response. This is the area of organizational culture.

According to the authors Hatunić, E. et al. (2010, p.36) „Organizational culture governing competence, managerial sources of energy, relations among employees is based on mutual respect and mutual trust. Organizational culture is a requirement that conflicts styles and interests transformed into constructive conflict that will result in economic effects“. Companies whose organization incorporates more intellectual capital than financial capital are more competitive and more profitable. More knowledge embedded in the organization through organizational culture, makes the company capable of implementing business plans.

Due to the increased pressure of global competition and the increased use of advanced information technology, construction organization and organizational design has become one of the main tasks of management. Today managers, as

never before, search for new and better ways to coordinate tasks and activities, as well as motivating employees to maximize the value that the company can create.

An economy cannot be competitive if the companies operating in it are not competitive, regardless of whether it is a domestic or foreign companies and their branches. On the other hand, development of strategies and operational practices of companies is inevitably linked with the quality of the business environment. More advanced and developed corporate strategies require highly skilled labor force, easy access to information, quality infrastructure; many vendors have developed scientific and research institutions and the presence of strong competitors.

Unlike material resources values are reduced by using organizational knowledge and using increases. Organizational knowledge has unlimited potential for the development of new ideas, especially if the people of the organization are encouraged to think, form and create new knowledge. Individually speaking, competitive advantage built on organizational knowledge provides benefits over a longer period of time than the competitive advantage built on material resources or technologies, because it is more difficult to copy. There is an increasing need for qualified and independent human resources, but also the necessity of retraining and further training. Investing in education is imposed as one of crucial factors of functioning of the company and the basis for gaining competitive advantage on the market. Insufficient and inadequate investment in the acquisition of knowledge of employees, often leads to a weakening or even loss of profits, weakening the competitive advantage to the enterprise and the entire national economy.

Knowledge of management is based on the ability to use and combine the resources, which means: physical, immaterial and human knowledge to achieve top results. The goal of management knowledge is constantly improving the efficiency of using existing knowledge and encourage learning to create new knowledge. For the implementation of management it is required: information and organizational infrastructure, organizational culture, internal management mechanisms and rewarding this strategy, which essentially depends on the organization.

Information and communication technologies are the infrastructures for the knowledge of a society. The creation of a knowledge based on society and sustainable development motives coordination among the key factors such as: investing in education, research and development and practical application of these research results, as well as the use of information and communication technologies. The development of electronic and communication technologies increases the speed of learning and knowledge transfer among employees. In the process, the workers also participate in the creation of entirely new knowledge, increasing the pool of available knowledge of the company. The progress is evident and it is essential that the level of learning is greater than the changes in the environment.

Organizational structure determines how employees should behave in performing daily tasks. The purpose of the organizational structure help create an environment in which activities of the business system will be continuously carried out. The organizational structure must determine the tasks to be performed, so the roles assigned to it must be shaped in accordance with the capabilities and motivation of the available people.

Managers at the top of the organizational hierarchy introducing information-based technologies, receive a powerful weapon in their hands. They increase their own range of control and a wealth of information is immediately available to them. In this way, the need for bulky hierarchical structure as traditional mechanisms for

information gathering and management levels that are in the system had a role of mediator is lost.

Although bureaucratic organizational structure now required in many organizations, the rapid development of information technology had an impact on the step towards organic structures. According to the authors of the book Hatunić, E. et al. (2010, p. 292) „Today's new organizational structure, such as networking, virtual, project, team, upset the model and some others that are closely connected with the advancement of information technology and telecommunications. The new organizational structure introduced in the existing bureaucratic structures of organic elements but the entire development organization today is moving towards organic structure“.

According to the research Prof. dr. Tipurić (1999) „Practice has shown that companies on the influences that come from them relevant environment, according to the "appropriate" in two ways. Companies say: selecting an appropriate organizational structure, which is a kind of "organizational response", and the selection of effective business strategies whose implementation "strategic response“.

For insight into the attitudes, by random sampling, 120 companies was contacted, of which 100 companies responded to the questions posed in the questionnaire taken for empirical research. When collecting data in the study, the limit is primarily related to the fact that in every company examined only by one respondent, usually the highest manager. His opinion has been taken as representative opinion. Data were collected in the form of a questionnaire, which achieved universality at the expense of deeper analysis of each individual company.

### **Research part**

The aim of this study is to investigate the importance of the organizational structure to build competitive advantage. The aim of the research is to determine how much the achievement of the strategic goals will influence the creation and maintenance of the company's competitive advantage. The research topic is the competitive advantage of companies viewed through the prism of the characteristics of the organization or organizational structure. The research should show whether the organization and its structure are of great importance for Bosnia and Herzegovina businesses in accordance with their business strategy.

The issue is considered by dealing with several factors that work to improve the competitive advantages of small, medium and large enterprises in Bosnia and Herzegovina.

H1. Knowledge about the competitive advantages of companies viewed through the prism of the characteristics of the organization, leads to the assumption: that building a sustainable competitive advantage the company determined the relationship between the organizational structure of the company and its business strategy.

H2. The traditional, flexible organizational structures are predominantly dominated by Bosnian-Herzegovinian companies.

Independent variables in this study are: company size, number of employees in the company, the structure of employees in a company, business enterprise, vision and mission of the company.

Dependent variables relates to competitive advantage, the company strategy and organizational structure of the company. In our case the quality of the company is seen through strategies that companies use in order to increase their competitiveness in the

market and sources of competitive advantage viewed through the prism of the organizational structure of the company.

By random sampling, selected and contacted 150 companies, of which 100 companies mainly respond to the questions posed in the questionnaire, which was taken for empirical research. Within the primary research, data were collected using the test method, using a questionnaire as a technical means of data collection. The respondents were companies, ie top-managers or mid-level managers. The survey was conducted on the population of small, medium and large companies in Bosnia and Herzegovina. Data were obtained from the registry of the Federal Office of Statistics of Bosnia and Herzegovina and the Federal Tax Administration of Bosnia and Herzegovina.

The questionnaire is substantially divided into three parts: contains general questions related to the fundamental characteristics of companies, questions about the strategy and the competitive advantage of companies, as well as key elements and characteristics of the organizational structure of the company.

The first group of questions is designed for testing the basic characteristics of the tested companies. The questions referred: the type of activity that the company engaged, number of employees, the structure of employees by level of education, definition and applicability statements of vision and mission.

The second group of questions related to the testing of variable strategies of companies, specific resources of large extent based on competitive advantage.

A third set of questions is designed for testing the organizational structure of the company. In terms of structure elements it is examined: type represented in the enterprise, assessment of the degree of centralization / decentralization, and being based on formal control.

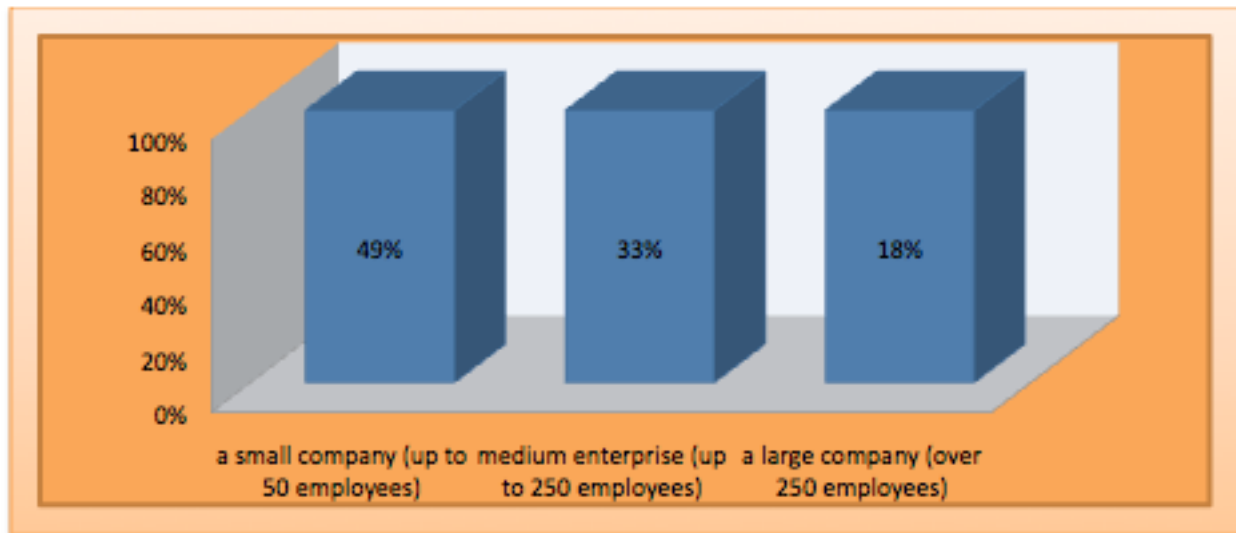
The questionnaire consisted of questions with the offered answers. Respondents were required to indicate the degree of agreement or disagreement with offered statements, the degree of agreement with a particular statement being measured by the ordinal scale of the Likert type. The degree of the scale, or the possible answers were the grades in the range of 1-5, with the intensity degrees: 1 - strongly disagree; 2 - I do not agree; 3 - Somehow I agree; 4 - I agree; and 5 - I completely agree.

The survey questionnaire was mailed to the management of the company and asked that they give an overview of the overall activity of the organization and evaluation of the observed variables for the entire organization.

### **Presentation of results of research**

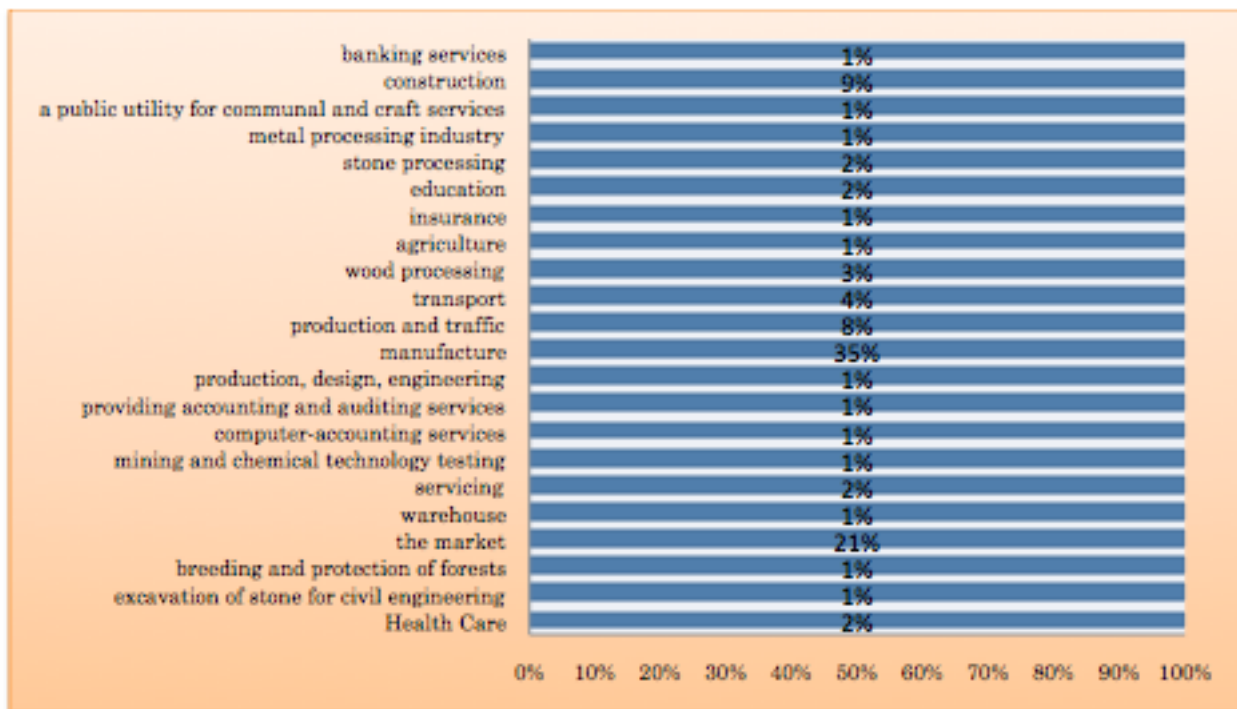
Of the surveyed companies, 49.00% are small businesses and have less than 50 employees, while 33.00% medium-sized companies have between 50 and 250 employees. Large companies (over 250 employees) account for 18% of the total sample (Graph 1.).

**Graph 1. Structure of enterprise sample by number of employees**



Two activities, production companies, (35.00%) and trading companies (21,00%) account for over half of the surveyed companies (51%). Followed by construction (civil engineering and building construction) (9.00%), production and marketing (8%), while other activities are between (1.00%) and (4.00%) to participate in the sample (Graph 2.).

**Graph 2. Sample Structure by Company Activity**



The question in research was about existence of vision and mission of the enterprises and 57.00% of respondents answered „Yes“, 16.00% answered "No",

while 27.00% did not answer the question at all. It is supposed that 27% of responses are results of lack of formulated vision and mission of the company. We can conclude that 43% of companies did not define the basic strategic orientation, which indicates a certain control deficiencies that can result in poor business results and other long-term consequences for the company (Graph 3.).

**Graph 3. Sample structure according to the review written definition of vision and mission in the company**



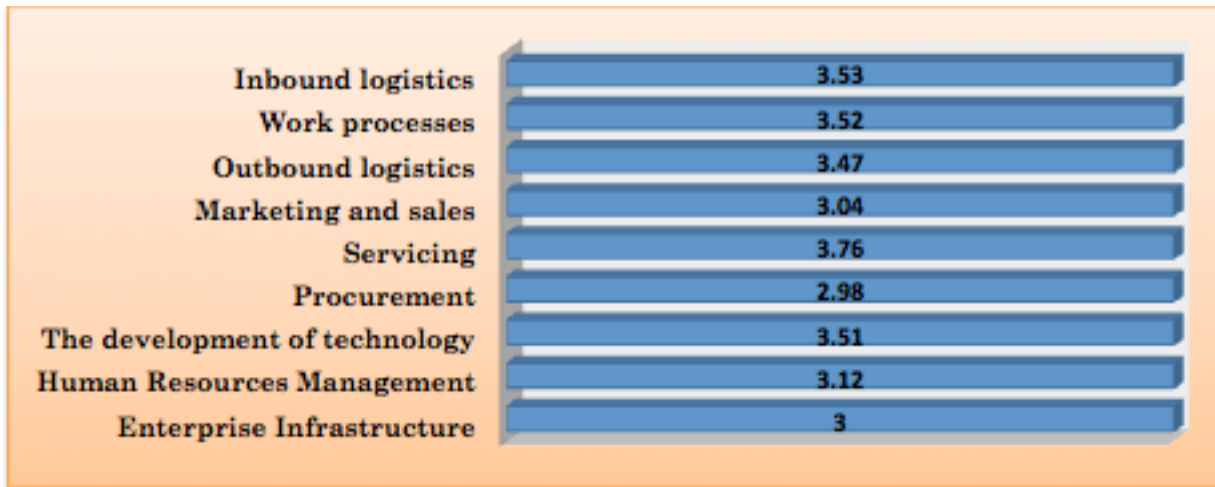
The other part of questionnaire relating to strategy of the company and the average value of characteristics on which the construction of competitive advantages of companies in Bosnia and Herzegovina marks subjects ranging from 1.06 to 1.86. The ratings of the respondents are very low (Graph 4.).

**Graph 4. : Average value characteristics underlying the competitive advantage of companies in Bosnia and Herzegovina**



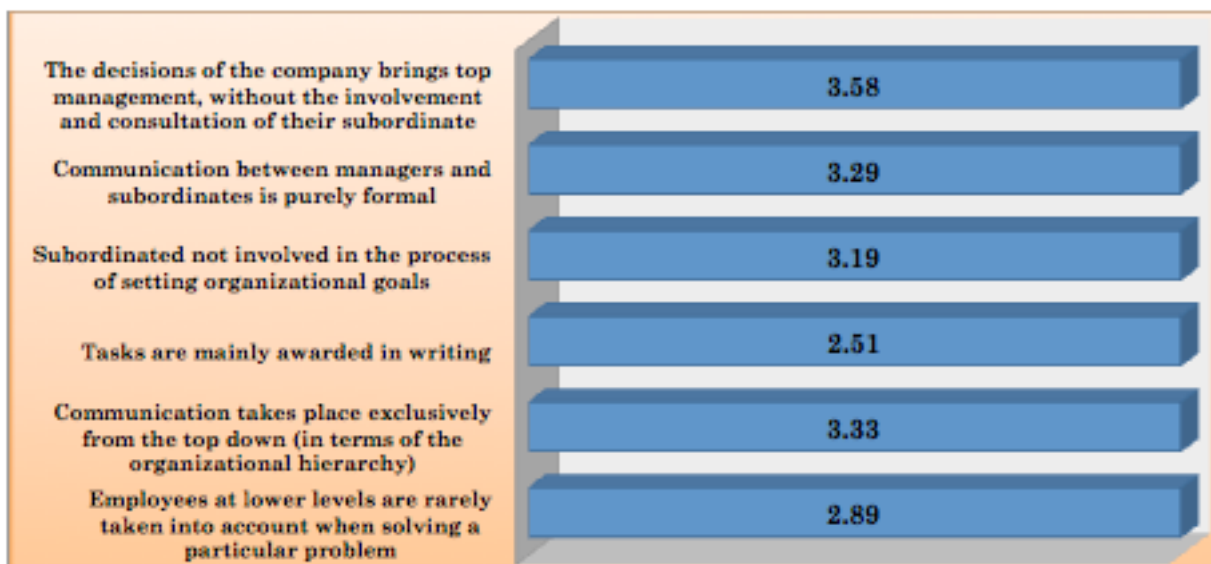
The part of questionnaire relating to the strategy of the company and the average value of areas in which companies have been trying to establish a competitive advantage research show rates from 2.98 to 3.76 (Graph 5.).

**Graph 5: Average value of areas in which businesses in Bosnia and Herzegovina are trying to build competitive advantage**



The part of questionnaire relating to the organizational structure of the company and the average representation of degree of centralization / decentralization in BiH companies moves from 2.51 to 3.58 (Graph 6.).

**Graph 6: Average values of the sample structure according to the degree of centralization / decentralization of enterprises in Bosnia and Herzegovina**



Presented research results:

- The chart of correlation shows that there is a moderate relationship between the choice of strategies between Bosnian companies and the resources on which the company form competitive advantage and how they contribute in increasing values of the companies in a way that ensures exploitation of external opportunities also opportunities and neutralization of external danger.

- The correlation chart shows that there is no link between the choice of strategy of BiH companies and the resources on which the companies are based on competitive advantage, and which competing firms do not or rarely possess.
- The chart of correlation shows that there is no link between the election strategy of Bosnian companies and resources even if the company is based on competitive advantage and that other companies have got difficulties to imitate.
- The chart of correlation shows that there is a moderate relationship between election strategy Bosnian companies and the resources on which the company based competitive advantage and which are such that the company was able to utilize their potential in building a sustainable competitive advantage.

As though the examination of relationships between the resources on which the construction of competitive advantages of companies in Bosnia and Herzegovina and the choice of competitive strategies Bosnian companies have shows the following conclusions:

There is a moderate correlation of chosen strategy and built competitive advantage based on the resources that contribute in increasing values of the company in such a way to ensure exploitation of external opportunities and chances and resources prepared for the company making it able to utilize their potential.

Building a competitive advantage based on the resources that are deficient and competitive companies without resources that are difficult to imitate or be replaced show dependence on a choice of strategy in Bosnian companies.

## **Conclusion**

The presented research results explicitly show that the level of competitiveness of enterprises in Bosnia and Herzegovina is at a very low level. Modern enterprises to survive or continue to successfully develop must continuously monitor and analyze trends in the environment, in order to observe changes, because they bring the relevant threats or opportunities, chances and risks. Presented the results of research has confirmed the hypotheses H2 : in BiH companies are predominantly represented traditional, inflexible organizational structure.

The quality of the business environment is usually assessed by surveying entrepreneurs. Therefore the quality of the resulting assessment depends on several different factors. The results obtained on the basis of different patterns that can lead us to unexpected and sometimes contradictory conclusions. The research results do not confirm the central hypothesis H1: "Meet the competitive advantages of companies viewed through the prism of the characteristics of the organization, leads to the assumption that the construction of sustainable competitive advantage of enterprises may bond business strategy and the characteristics of the company organization .."

The only vital route for survival and development of enterprises in the present circumstances is that competitiveness is created by establishing an effective innovative strategies in response to the numerous challenges of the environment. Precisely this is why it stresses the importance of organizational strategy to build a sustainable competitive advantage and implement strategies of companies.

Preparation of Bosnia and Herzegovina to join the European integration requires building of competitive economies and companies able to withstand the pressure of the common market, the strengthening of institutions and public administration. For BiH companies is of great importance to build long-term competitive advantage, and



to achieve this goal. It is necessary that the organization and its structure exist in the same line with business strategy and strategic goals.

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# A Model for Competency Development of Thai Tourism and Hospitality Business Entrepreneurs for Operating International Business within the ASEAN Economic Community (AEC)

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## Abstract

*This article aims to evaluate the competency of Thai tourism and hospitality business entrepreneurs for operating international business with the primary focus on spa business entrepreneur and Thai restaurant entrepreneur within the ASEAN Economic Community and propose a model for developing them. The study employed quantitative method by giving out the questionnaires to spa business entrepreneur in Thailand, international tourists who experienced spa in Thailand, Thai restaurant entrepreneur in Thailand and international tourist who experienced Thai restaurant in Thailand. In evaluating of the competency of the spa entrepreneur, it was discovered that the competencies that needs to be developed were marketing management, landscaping, creating a good impression and atmosphere that is inviting to tourist, value driven service, personal competency of the individual spa operators, human resource management, business operation within the ASEAN Economic Community, social responsibility and networking, market and environment analysing before investing in a business, risk analysis, creative idea developing and consistent following up of new developments in related fields. In assessing the competency of Thai restaurant entrepreneur, it was discovered that the competencies that needs to be developed were management, self-management, human resource and service management, food products development, international business within the ASEAN Economic Community, planning and management, environment and market analysis before investing in a business, risk analysis, network building, managing raw materials and importing from Thailand, creative ideas for the customers, and flexibility in adapting the menu to fit ingredients that are available. Then, the models were proposed for developing the competency of entrepreneurs in operating international business within the ASEAN Economic Community.*

*Keywords: Competency assessment, Spa entrepreneur, Restaurant entrepreneur, Business competency*

## Background

The ASEAN Community is comprised of three pillars, namely the ASEAN Political-Security Community, ASEAN Economic Community and ASEAN Socio-Cultural Community. The ASEAN Economic Community (AEC) is one of the 3 pillars of ASEAN community which was established in 2015. The AEC is aimed to create the regional economic integration with an encouragement of the free flow of goods, services, investment, capital and skilled labour among the countries member offering opportunities in the form of a huge market in order to compete in the global economy. The vision of AEC is to advance a single market agenda through enhanced commitments in trade in goods, and through an effective resolution of non-tariff barriers; provide integration in trade in services; and create freely movement of investment,

skilled labour, business persons, and capital which will support sustained high economic growth. The action plan of AEC also undertake the blueprint to the enhance connectivity and sectorial cooperation with improvements in regional frameworks including strategic policies vital to the effective operationalisation of the economic community, the development of infrastructure, intellectual property protection, the development of ICT and energy, a community with enhanced micro, small and medium enterprise development policies and cooperation to narrow the development gaps, greater economic opportunities that support poverty eradication and a united ASEAN with an enhanced role and voice in global economic.

Thai service sectors benefit from being the member of the AEC in term of investment and working in the ASEAN countries more easily. The most potential Thai business is in service sector such as restaurant, hotel; medical service for example hospital, spa, Thai massage; and other services such as construction, design, entertainment, and maintenance etc. Those benefits of joining the AEC is the great opportunity to show the global market of the strength of Thai entrepreneur in the service sectors to be able to expand their businesses in ASEAN countries especially for spa and restaurant businesses due to the outstanding of these type of businesses in an international eyes. Besides, spa and restaurant businesses are in the government strategic policy to enhance the standard of the country by improving these businesses to be stand out in the world standard. Hence the spa and restaurant entrepreneurs need to speed up their level of competition and be able for the adaptation to stand sustainably in the world market.

However, there are internal and external barriers for the ASEAN's investors. The external barriers are the business environment and policies which are not propitious due to the different policies, laws and regulations of each country, the transmigration issues, the land ownership, and the labour law which still support their own investors and less support cross-border businesses. Therefore, the new face investors with a purpose to build their new business need to encounter the difficulty in many kind of laws and regulations even though ASEAN has established the agreement but there are still many factors that needed to be considered in order to be a perfect single market. The internal barriers are the entrepreneurs who might lack of experience and not well-understood the level of expanding of their own businesses in ASEAN market. Also the lack of market competency the level of competition and the business strategies are still underdeveloped. In doing so they still need many business alliances in an international level and high skilled labour both in quantitative and qualitative. Hence the entrepreneurs promptly need to attune the way to do businesses by paying attention on universal system management, developing marketing strategies, and be able to work in the cross-culture environment which is the urgent requirement due to the variety of nationality of the worker in a business.

As for these circumstances, there is the need to have the study about the type for competency development of the entrepreneurs in service sector in doing international business in ASEAN. This study focused on Thai spa and Thai restaurant businesses as a pioneer of a Thai business in ASEAN in order to provide the more understanding of how to run an international business and help to reduce any obstacles for doing business in the future.

## Key issues from literature

### Competency and performance

Boyatzis (1982) defined competency as an underlying characteristic of an individual, which is causally related to effective or superior performance in a job which could be 'a motive, trait, skill, aspect of one's self-image or social role, or a body of knowledge which he or she uses. In McClelland (1973) a competency is each personal characteristic which (usually combined with others) allows the effective execution of a particular task in a given organisation. He also explained the important attributes of competency that consists of skill: the ability of a person to do something well and then expertise, knowledge: a practical understanding of a subject, self-concept: an idea and opinion of the self-constructed from the beliefs one holds about oneself, trait: a distinguishing quality or characteristic of a person, and motive: a reason for doing something which lead a person the accomplish his aim such as an achievement orientation person usually set the challenge goals and attempt to finish the task with an improvement for the next task. Parry (1997, p.50) describes a competency as a cluster of related knowledge, skills and attitudes that affects a major part of one's job (a role or responsibility), that correlates with performance on the job, that can be measured against well-accepted standards, and that can be improved via training and development.

The scholars from San Diego State University, USA, Testa and Sipe (2012) have developed the service-leadership competency model which has become useful tools in hospitality and tourism industry. This competency model comprises of 3 clusters which are Business savvy including: planning; numberwise; continuous improvement; strategic decision making; systems thinking; technical service; and results oriented, People savvy including: interpersonal; communication; expressive service; team orientation; coaching and training; inspiration; cultural alignment; and networked, self-savvy including: accountability; professionalism; self-development; time management; spirit of optimism; and change management. It also suggested there should a balance of 3 clusters for the successful in business.

The study of managerial competencies of management professionals by Bakanauskienė and Martinkienė (2015) who adopt from the work of Goleman and Boyatzis (2008), Woodcock and Francis (1982) and Baležentis (2006) classified managerial competencies into 3 categories which are Professional competences, Social competencies, and Personal competencies. First, professional competences consist of planning, problem-solving, information gathering, analytical thinking, abstract thinking, strategic thinking, learning from one's own and others' experience, striving for results, initiative, business-like orientation, generation of ideas, diligence, resolution, global perspective, organizational skills, team-work, negotiating skills, leadership, conflict-handling, communication, organizational awareness, systemic logics, written communication, creativeness and ability to implement innovations, modern knowledge, time management, risk assessment, risk-taking, defining the circle of personal interests. Secondly, social competencies involve communication and influencing others, verbal communication, convincing communication, effective relations, orientation to customer, goal-setting, delegation of authorities, change management, performance management, fairness, responsibility, flexibility, cultural awareness, qualification, group building and development skills. Lastly, personal competencies contain self-confidence, stress management, personal reliability, loyalty, self-control, self-confidence, achievements, self-management, listening skills, system of personal values, personal goals, continuous

personal self-development, personal responsibility for taken decisions, awareness of ethics relevance in business. This managerial competencies model is quite similar to the work by Ventureprise (2013) who assembles entrepreneurial competency as Personal Effective Competency: interpersonal skills; strong initiative; adaptability and flexibility; willingness to learn; willingness to take risk; ambition, Workplace Competency: creative thinking; problem solving and decision making; networking; planning and organizing; checking, examining and recording; business fundamental; and computer applications, and industry wide competency comprising: principle of entrepreneurship; innovation and invention; planning; marketing; financial management; business operations; risk assessment and management.

Another study of entrepreneurship competency by Kochadai (2012) also divides competency into 3 types which are attitudinal competency, behavioural competency, and managerial competency. There are self-confidence, self-esteem, dealing with failures, tolerance for ambiguity, performance, concern for high, quality, and locus of control in attitudinal competency. Whilst there are initiative, acting on opportunity, persistence, assertiveness, need for achievement, need for autonomy, risk-taking, drive and energy, innovation, and creativity under behavioural competency. Finally, there are information seeking, systematic planning, problem solving, persuasion, goal setting, perseverance, communication skill, technical knowledge, and social skill. More Study on entrepreneurship competency categories competency into many areas including opportunity competencies, relationship competencies, conceptual competencies, organising competencies, strategic competencies, and commitment competencies (McClelland, 1987; Mitton, 1989; Chandler and Jansen, 1992; Adam and Chell, 1993; Durkan et al., 1993; Baum, 1994; Snell and Lau, 1994; Bird, 1995; Bartlett and Ghoshal, 1997; Gasse, 1997; Hunt, 1999)

In term of performance, the researcher viewed Thai spa and restaurant performances in accordance with competency which are 1) Business performance by comparing of the business competitor, annually business growth, ROA, cash flow, and image of the business; 2) Management performance such as creating business distinctive point, continuity of business plan, team work oriented, creatively motivate staff to work efficiently, new product recommendation from last year, product line extension, new customer, technology base for service, monitoring the work process in order to improve service quality, regularly revise the service quality for the improvement purpose, applied technology to maximise customer satisfaction, the prevention of service process faulty, process of handling faulty, and producing work manual; 3) Human resource management performance such as human resource management, regularly trained staff, staff knowledge on service quality, self-development, opportunity of staff evaluation by customer, effectiveness of staff and steady deliver service quality, good staff welfare, growth in career path opportunity, appreciation for the good performance and good service staff, in-house staff monitor, and staff satisfaction, 4) Network collaboration performance for example social relationship, activity of social, organisational network; and 5) Customer service for instance customer relationship, customer need assessment, customer service delivery, service quality evaluation by customer, customer loyalty, treat all customers equally, customer care, and exceed customer expectation.

## Research Methodology

The method applied in this study was the assessment to evaluate the need of development before developed the pattern of the competency development for running Thai spa and Thai restaurant business in ASEAN for Thai entrepreneurs. In the need assessment stage of both Thai spa and Thai restaurant, the quantitative approach was used. 420 questionnaires were distributed to Thai spa entrepreneur as same as international tourists who used the spa service in Thailand. 433 questionnaires were distributed to Thai restaurant entrepreneurs in Thailand and also 416 questionnaires were distributed to tourists who dined in the restaurant in Thailand. This population were selected according to maximum likelihood parameter estimation. Therefore the large amounts of population number were required. Lindeman, Merenda and Gold (1980) indicated a method of estimating the parameters of a statistical model using variables and should set the case by 20 times multiple of variable. Questionnaires were the research tool for this study which gave out to the entrepreneurs in Thailand. The questionnaires consisted of 5 sections which are demographic information, business background, business related competencies, performances, and an open ended question on problems and suggestions in term of doing businesses. The questionnaires for the tourist who used the spa and restaurant in Thailand comprised of 7 sections which are demographic information, tourist behaviour in Thailand, customer behaviour, opinion on business facilities used, satisfaction of services used, loyalty of services used and an open ended question on problems and suggestions in term of using businesses.

The questionnaires were content validated using the index of item objective congruence measure. The evaluation of index of item objective congruence (IOC) was employed by three experts in the field of this research topic for the development of measurement instruments. The questions used, obtained the IOC between 0.60 – 1.00 which were deemed acceptable. Then the questions were tested for reliability with the 40 pilot study to find the value of Cronbach's Alpha which is more than 0.7. The population of the research is mixed sampling method, from the 8 provinces of the highest tourism income. The data were analysed using descriptive statistics, inferential statistic, exploratory factor analysis, confirmatory factor analysis and structural equation modelling. In order to test the hypothesised model of the type of competency development of Thai tourism and hospitality entrepreneurs, path analysis was applied to see the relationship between direct and indirect variables. To confirm the research model, goodness-of-fit test was measured to assess the fit of a model. The questionnaires were collected, an exploratory factor analysis (EFA) was performed. The use of varimax technique indicated Kaiser-Meyer-Olkin measure (KMO) was higher than 0.05 which determined significantly correlated factors and Bartlett's Test of Sphericity was significant (Sig.< .05), confirmed that factor analysis was appropriate on these items.

**Table 1: The result of KMO and Bartlett's Test of Sphericity**

Sampling	KMO	Chi-Square	Df	Sig.
Thai Spa Entrepreneurs	0.966	52048.528	2278	0.000
Thai Spa Tourists	0.932	5211.504	325	0.000
Thai Restaurant Entrepreneurs	0.971	30372.244	2278	0.000
Thai Restaurant Tourists	0.951	7683.590	351	0.000

The results analyses determined significantly factors and correlated component, which are 4 factors of Thai Spa Entrepreneurs divided into 9 components; 3 factors of the tourists' perception toward Thai spa divided into 5 components; 4 factors of Thai restaurant entrepreneurs divided into 5 components. These factors then were analysed again to test the research framework correlation using confirmatory factor analysis (CFA).

**Table 2: The comparison of before and after factors used exploratory factors analysis (EFA)**

Sampling	Before Analysis	EFA	After Analysis
Thai spa entrepreneurs	<ol style="list-style-type: none"> <li>1. Business competency</li> <li>2. Social competency</li> <li>3. Behaviour competency</li> <li>4. Specific competency for spa entrepreneur</li> </ol>		<ol style="list-style-type: none"> <li>1. International business in AEC competency</li> <li>2. Behaviour competency</li> <li>3. Human resource management competency</li> <li>4. Specific competency for spa entrepreneur</li> <li>5. Strategic competency</li> <li>6. Marketing management competency</li> <li>7. Business competency and opportunity analysis</li> <li>8. Corporate social responsibility competency</li> <li>9. Service quality competency</li> </ol>

Thai spa customers	<ol style="list-style-type: none"> <li>1. Atmosphere perception</li> <li>2. Management and marketing process perception</li> <li>3. Human resource management and customer service perception</li> </ol>	<ol style="list-style-type: none"> <li>1. Atmosphere perception</li> <li>2. Marketing mix perception</li> <li>3. Service quality perception</li> <li>4. Staff expertise perception</li> <li>5. Value added in service perception</li> </ol>
Thai restaurant entrepreneurs	<ol style="list-style-type: none"> <li>1. Business competency</li> <li>2. Social competency</li> <li>3. Behaviour competency</li> <li>4. Specific competency for restaurant entrepreneur</li> </ol>	<ol style="list-style-type: none"> <li>1. Plan and management competency</li> <li>2. International business in AEC competency</li> <li>3. Self-management and business competency</li> <li>4. Corporate social responsibility and network creation competency</li> <li>5. Human resource management competency</li> <li>6. Service quality competency</li> </ol>
Thai restaurant customers	<ol style="list-style-type: none"> <li>1. Atmosphere perception</li> <li>2. Management and marketing process perception</li> <li>3. Human resource management and customer service perception</li> </ol>	<ol style="list-style-type: none"> <li>1. Human resource management and customer service perception</li> <li>2. Product perception</li> <li>3. Image and marketing perception</li> <li>4. Price and place perception</li> </ol>

The research hypotheses were tested using factors which the two stage testing process were adopted to examine the direct and indirect influences according to the conceptual framework of the competency development of tourism and hospitality entrepreneurs. The SEM procedure was an appropriate solution for this proposed hypothetical model due to the goodness-of-fit. As shown in Table 3, the results showed the analysis of variables: spa entrepreneurs (figure 1), Thai spa customers (figure 2), Thai restaurant entrepreneurs (figure 3), and Thai restaurant customers (figure 4).

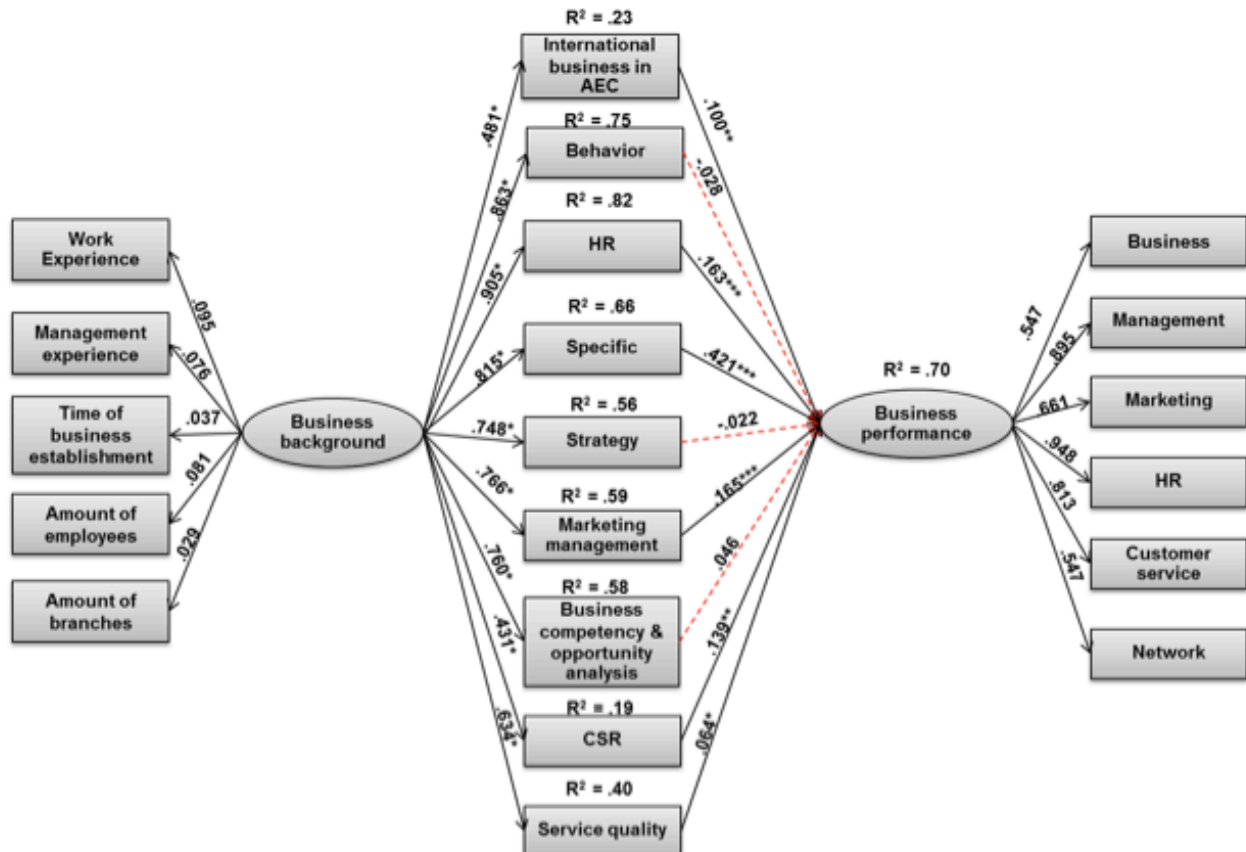


**Table3: The analysis of variables for entrepreneur competency (Spa/Restaurant) and customers of Thai Spa/Restaurant**

Sampling	Index	Indicators	Before Model Adjusting	After Model Adjusting	Statistic Value	Result
			Statistic Value	Result		
Thai Spa Entrepreneurs	CMIN/df	< 3.00	21.960	Not Pass	1.985	Pass
	P-Value of CMIN	< 0.05	0.000	Pass	0.000	Pass
	GFI	> 0.90	0.586	Not Pass	0.976	Pass
	AGFI	> 0.90	0.525	Not Pass	0.952	Pass
	AMSEA	< 0.05	0.158	Not Pass	0.034	Pass
Thai Spa customers	CMIN/df	< 3.00	5.878	Not Pass	1.776	Pass
	P-Value of CMIN	< 0.05	0.000	Pass	0.001	Pass
	GFI	> 0.90	0.890	Not Pass	0.985	Pass
	AGFI	> 0.90	0.820	Not Pass	0.969	Pass
	AMSEA	< 0.05	0.108	Not Pass	0.030	Pass
Thai restaurant entrepreneurs	CMIN/df	< 3.00	9.984	Not Pass	1.678	Pass
	P-Value of CMIN	< 0.05	0.000	Pass	0.000	Pass

	GFI	> 0.900	0.767	Not Pass	958	Pass
	AGFI	> 0.900	0.679	Not Pass	0.934	Pass
	AMSEA	< 0.055	0.144	Not Pass	0.040	Pass
Thai restaurant customers	CMIN/df	< 3.000	2.979	Not Pass	1.230	Pass
	P-Value of CMIN	< 0.055	0.128	Not Pass	0.000	Pass
	GFI	> 0.900	0.944	Pass	0.978	Pass
	AGFI	> 0.900	0.907	Pass	0.960	Pass
	AMSEA	< 0.055	0.069	Not Pass	0.024	Pass

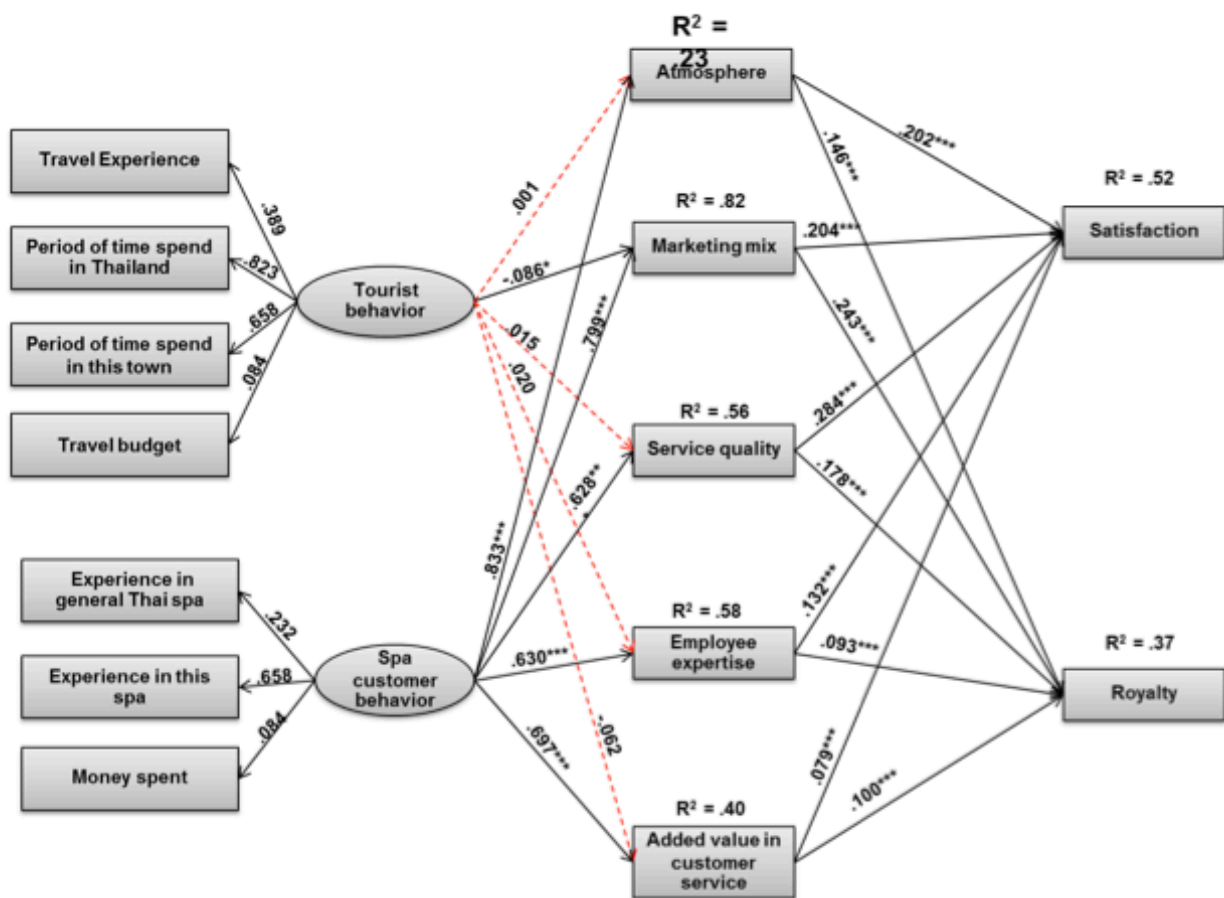
Figure 1: The analysis of Thai spa entrepreneur variables



CMIN/df = 1.985      GFI = .976      AGFI = .952      RMSEA = .034  
 Note: \*\*\*p<0.001, \*\*p<0.01, \*p<0.05

The hypothesis used in the study to test the importance of variable of the competency development in running spa businesses of Thai spa entrepreneurs in term of international business in AEC. The structural equation model presented in Figure 1 provides direct and indirect influences of entrepreneur competencies to the business performances. Overall, the model in Figure 1 accounted for 70% ( $R^2 = .70$ ).

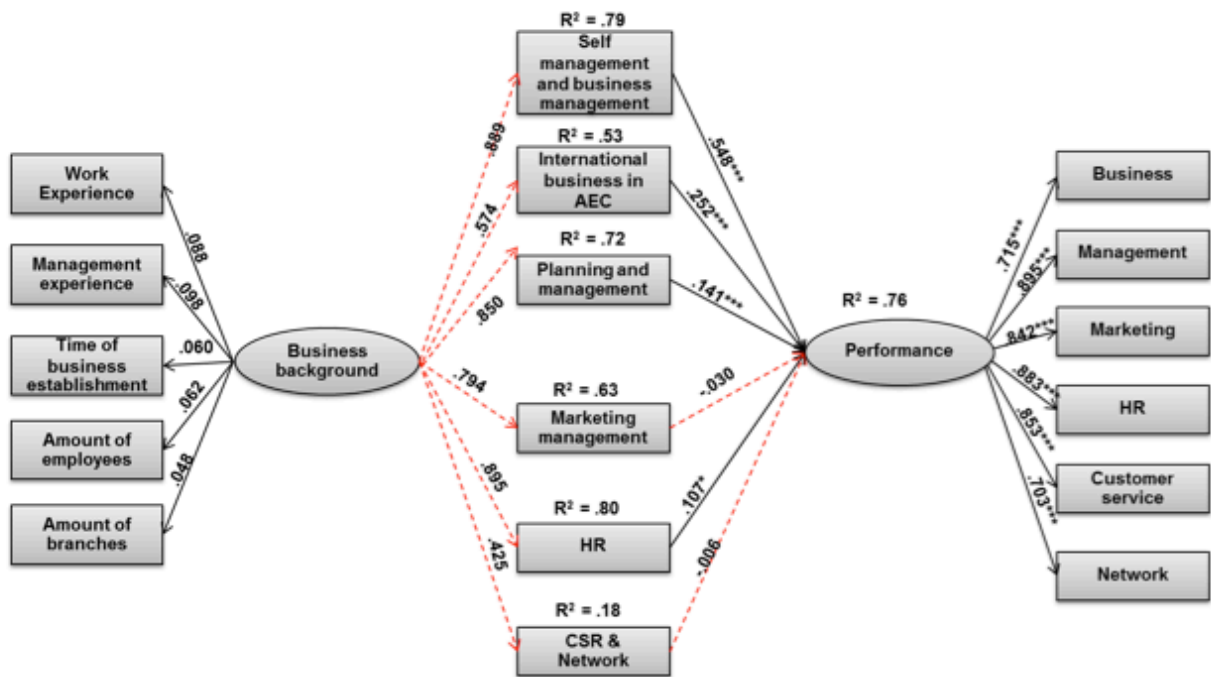
**Figure 2: The analysis of spa customer variables**



CMIN/df = 1.776      GFI = .985      AGFI = .969      RMSEA = .034  
 Note: \*\*\*p<0.001, \*\*p<0.01, \*p<0.05

The hypothesis used in the study to test the importance of variable of the competency development in running spa businesses of Thai spa entrepreneurs in term of international business in AEC. The structural equation model presented in Figure 2 provides direct and indirect influences of entrepreneur competencies to the customers' satisfaction at 52% ( $R^2 = .52$ ) and royalty at 37% ( $R^2 = .37$ ).

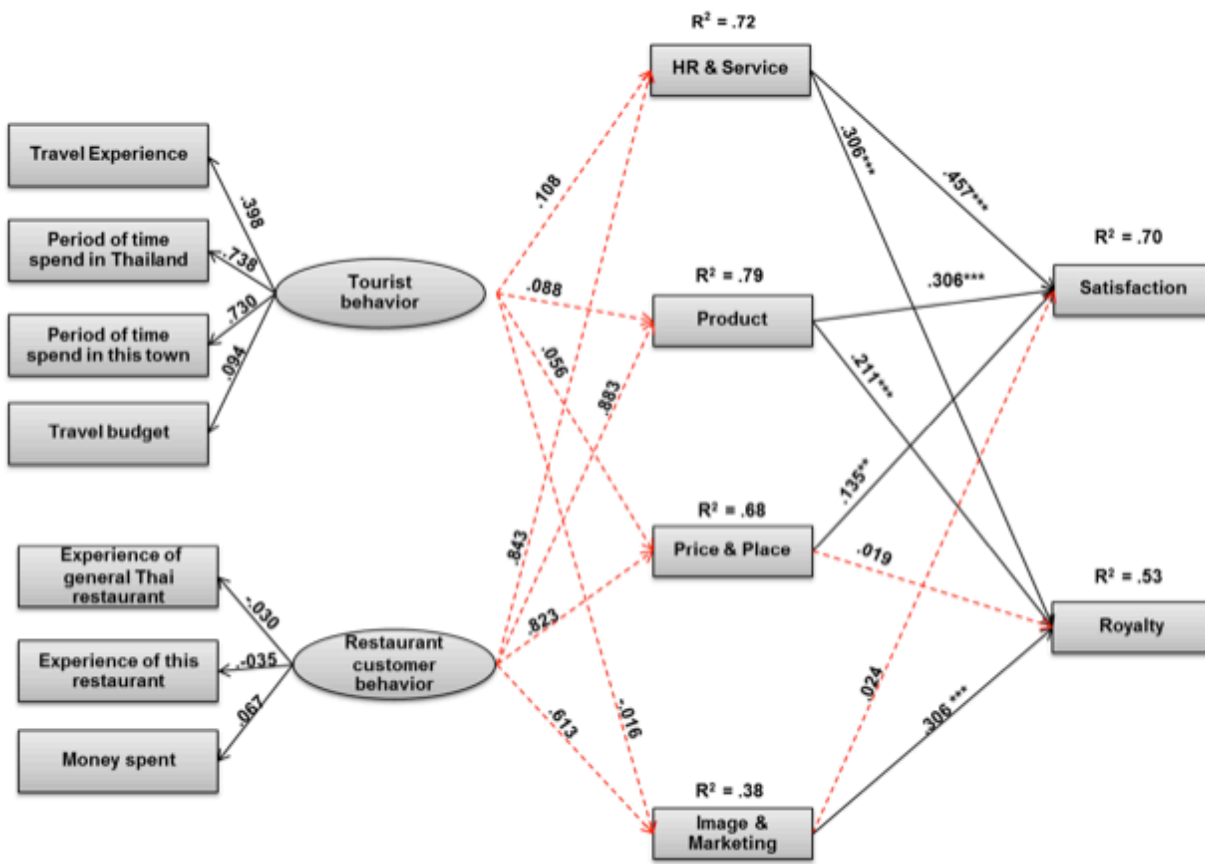
Figure 3: The analysis of Thai restaurant entrepreneur variables



CMIN/df = 1.678    GFI = .958    AGFI = .934    RMSEA = .040  
 Note: \*\*\*p<0.001, \*\*p<0.01, \*p<0.05

The hypothesis used in the study to test the importance of variable of the competency development in running restaurant businesses of Thai restaurant entrepreneurs in term of international business in AEC. The structural equation model presented in Figure 3 provides direct and indirect influences of entrepreneur competencies to the business performances. Overall, the model in Figure 3 accounted for 76% (R²= .76).

Figure 4: The analysis of Thai restaurant customer variables



CMIN/df = 1.230    GFI = .978    AGFI = .960    RMSEA = .024

Note: \*\*\*p<0.001, \*\*p<0.01, \*p<0.05

The hypothesis used in the study to test the importance of variable of the competency development in running restaurant businesses of Thai restaurant entrepreneurs in term of international business in AEC. The structural equation model presented in Figure 4 provides direct and indirect influences of entrepreneur competencies to the customers' satisfaction at 70% ( $R^2 = .70$ ) and royalty at 53% ( $R^2 = .53$ )

The suggested models for competency development for Thai spa entrepreneurs and Thai restaurant entrepreneurs for operating international business within the ASEAN Economic Community (AEC)

### Conclusion and discussion

The result from the analysis of entrepreneurs and the customers of Thai spa businesses indicated that the required competency to enhance effective performances of Thai spa entrepreneurs for running spa business in AEC are international business in AEC competency, human resource management competency, specific competency for spa entrepreneur, strategic competency, marketing management competency, business competency and opportunity analysis, corporate social responsibility competency, and service quality competency. The statistical analysis (exploratory factor analysis and confirmatory factor analysis) showed that the new components for the structural equation model are not different due to the fact the attributes of spa business have

universal elements and standard. On the other hand, the components from the statistical analysis (exploratory factor analysis and confirmatory factor analysis) are significantly different from their origin components. The reason of these differences might be caused by the unique identities of the Thai context in term of Thai restaurant management. Therefore the required competency to develop effective performances of Thai restaurant entrepreneurs for doing their business in AEC are international business in AEC competency, marketing management and integrated marketing communication competency, human resource management competency, corporate social responsibility and network creation competency, service quality competency, and self-management and business management competency.

According to the statistical analysis, the competencies both Thai spa and restaurant entrepreneurs need to develop are international business AEC Competency, human resource management competency, service quality competency, corporate social responsibility and network creation competency, and marketing competency while the additional competencies that needed to be develop for Thai spa entrepreneurs are strategic competency, business competency and business analysis and specific competency for spa entrepreneur and for Thai restaurant entrepreneurs are self-management and business management competency. The findings of this study were associated to many studies on entrepreneur competency. For example the study from Wu (2009), who found that the entrepreneur should have the competency on analytical thinking, systematic problem analysis, business acumen, client service orientation, commitment to learning, communication, conceptual thinking, developing others, empathy, flexibility, motivation, information seeking, initiative, personal motivation, and relationship building. Same as Causin and Ayoun (2011) who studied on the competency of successful international business entrepreneurs and develop a competency model which focused on 3 main themes which are personal competencies, global management skill competencies, and expatriate adjustment competencies. Personal competencies are view the organisation in a holistic manner, ability to acknowledge, balance and work with cultural differences, effectively receive ideas and information from others, grasp on how all the parts of the organization fit together, have the mental capacity to understand the overall workings of the organization and its environment, awareness of own cultural background, effectively conveys ideas and information to others, get along with subordinates, peers and those at higher levels of the organization, open-minded and flexible in thought and tactics, ability to understand why foreigners behave the way they do, able to deal with complexity, have a technical and managerial expertise, cultural interest and sensitivity, demonstrate cultural empathy, and orientation towards time. Global management skills comprised of understanding international marketing, international negotiation skills, coordinate the budgeting process between foreign operational headquarters, understand a variety of foreign business systems, understanding international finance, ability to work in international teams, and language skills. Lastly, expatriate adjustment competencies contained the following traits: emotional stability, stable personal life, resilient, resourceful, optimistic, and energetic, adaptability to new environment settings, and honesty and integrity.

The results of this study are also in line with the study by Isenberg (2008) who claimed that in doing international business, there should be four necessary competencies which are objective linkage of international business, partnering, supply chain creating, and multi nation structure planning. Similar to the study of Ahmad et al. (2011) which improved from the concept by Man et al. (2002) and Chandler and Jansen (1992) covered all the view of competencies that the entrepreneurs should have with the Asian

context information. Additionally, the study of Ahmad (2007) who applied qualitative approach to explore 20 entrepreneurs in Australia and Malaysia introduced 12 competencies which are strategic competency, commitment competency, conceptual competency, opportunity competency, organizing and leading competency, relationship competency, learning competency, personal competency, technical competency, ethical competency, social responsibility competency, and familism competency. Hence the study of entrepreneur competencies both in process and behaviour could indicate the attributes which can effectively support the organization in long term while the study of skills and abilities are only for the current competition (Man et al., 2002). Moreover, competencies can reveal the level of strategic management skill especially for the new investor and business development. In order to be successful the type of competencies used should be suitable to the industry (Zapalska et al., 2004).

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## Investigating SME's strategic approach in the context of Internationalization and Organizational Capabilities in the German MedTech Industry

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### Abstract

*This research is focusing on small and mid-sized enterprises (SMEs) in the German Medical Technology (MedTech) industry and investigates the antecedents and the effects of organizational capabilities on their strategy regarding international ventures. Although there is various research in the field of strategy, internationalisation and SMEs, the impact of existing research in the specific field of German MedTech SMEs is relatively poor while theoretical and empirical findings obtained in another particular institutional context are not yet applicable in other countries or industries. As a consequence, a systematic review of the literature has been conducted. An initial conceptual model was developed, in which significant findings regards country, industry and firm-specific aspects could be identified. The philosophical stand of the researcher and his ontological view as a post-positivist allows both, a qualitative and a quantitative approach. By applying a mixed method approach a focus group discussion provided in depth-knowledge in order to sharpen the initial model. Antecedents, as well as the most important factors related to strategy, were emphasized and further important aspects that focus on capabilities were revealed. With these results, constructs and relationships were modelled and quantitative data from a survey with more than 60 German MedTech SMEs were collected and assessed. This approach led to the finding that factors such as 'market potential', 'physical capital', 'medical regulations' and 'product competitive-ness' have the highest influence on the firm's strategic approach. 'Organizational learning' and 'coordination mechanism' have particularly an impact on strategy development, whereas relationship capabilities mediating effect on the strategy-competitive advantage relationship. Firm size and firm's experience in international ventures influence a firm's internationalisation. The results will serve as a strategic input for SME's in the German MedTech industry. This research provided a contribution to knowledge that is relevant from an academic as well as from an economic point of view. The findings should help academics, MedTech SMEs, and governmental institutions to understand the decisive factors for internationalisation and the importance to develop specific organizational capabilities in this context. This understanding contributes towards a sound development of German MedTech SMEs in their future internationalisation.*

**Keywords:** Internationalization, SME , MedTech, Strategy, Organizational Capabilities

## **Introduction: Motivation for the specific research context**

Although a firm has different strategic options, internationalization often is an important element to support a firm's overall strategy. SMEs in German MedTech industry face a fundamental challenge. They are strong in domestic and EU markets, but compared to other high-tech industries they are under-represented in the large growth markets in overseas (Wiechers, 2016). But today healthcare market growth rates in Germany and the EU are stagnating due to restrictions on taxation and social security contributions, whereas foreign markets develop dynamically (Kuhlmann, 2014). Germany is the third largest medical technology provider in the world. German small and medium sized enterprises (SMEs) enjoy universal recognition as manufacturers of medical technology (MedTech) products (MacDougall, 2012). High product development costs with respect to a distinctive innovation strategy force these companies to increase turnover. Consequently this means to recover investments via internationalization, but this is often constrained by resource limitations or challenging environmental regulatory related factors. In case these SMEs will not find a way to successfully internationalize their business, they will disappear from the market sooner or later. This would have an economic impact, since the MedTech market is of major importance not only for the healthcare system but for the industrial development in Germany as well (Wintermantel, 2009). There would be as well a social impact, since the access to better treatments and the rapid progress on medical technology for the benefit of the patients in the context of the demographic challenges require maintaining supply, innovation and competition in MedTech for the future.

With respect to firm's internationalization the academic literature often refers to the three main strands of theories, namely the stage theory, contingency theory and the resource-based view, which represent three basic patterns in this context. Nevertheless, the literature suggests, that whilst there are some common processes and patterns among firms' internationalization, the variations can be explained through contingency theory. However, this neglects the specific industry context in which the firms operate as an important factor in their internationalization process. Hence, there need for integration of industry and country specific factors.

The aim of this research is to find out which specific factors influence the strategic approach and consequently the development of international ventures in German MedTech SMEs, how organizational capabilities are related to their strategic approach and what influence they have on strategy execution. Based on theoretical justification and on an empirical investigation, a conceptual model of international expansion in this industry leads to understand the behaviour of such SMEs and evaluates important ingredients of success and identifies those that appear to be most prevalent.

## **Internationalization: Issues regarding antecedents and the role of capabilities an strategy**

Internationalization from the view of a company can be described as the process of becoming multinational. In the first phase of this process a company sells its products in the domestic market. In a second phase the company begins selling its products abroad. The next step in the internationalization process may be the establishment of an international sales network. Then the process of internationalization has advanced

so far that the individual company has manufacturing, sales and R&D in a number of countries and it becomes multinational (Levitt, 1986).

Although, researchers acknowledge that such a development towards internationalisation is covered by well-established theories since many years, there is also some criticism. Circumstances have changed and internationalization theories do not cover all aspects of the current development in the world (Holtbrügge, 2005). Transportation has become cheap and information technology enables close cooperation all over the world. The availability of knowledge in the times of the internet and real time information at any place in the world are enablers for recent developments but also caused a change regards established business paradigms.

According to the resource based view, firm size plays an important role with respect to SMEs internationalization process, particularly in the context of limited resources and knowledge. In this context, Shaw and Darroch (2004) observe a notable gap in the literature particularly concerning the role of organizational capabilities for SMEs.

Furthermore, in the context of strategy, the internationalization process is complex and determined by many different factors that encourage or discourage international involvement. There is some disagreement within the literature in terms of the relative significance of internal versus external contingency factors. According to Murray et al. (2010) researchers have conceptualized the environment as one of the key constructs of understanding organizational behaviour and strategic approach depending on the competitive setting of the business. In contrast, Leonidou et al. (2010) holds the view that internal organizational characteristics are more important, particularly in an organizational and managerial context.

Organizational capabilities affect the development and execution of firm's internationalization strategy and therefore its performance (Morgan et al., 2004). Through the lens of the resource-based view capabilities, a firm's management skills or its organizational processes for instance, are valuable and rare (Barney, 1991). Following the knowledge based theory, a firm's capability to co-ordinate internal competencies enables the transformation of knowledge into value creating processes. But there is a discourse on the impact of capabilities on strategy and firm's success. Atuahene-Gima and Murray (2004) highlight the influence of organizational capabilities in the context of the strategy development. In contrast, Lages et al. (2009) sees little empirical evidence of strategic impact of capabilities on strategy and performance in the context of internationalization. Hence, Theodosiou and Katsikeas (2013) consider firm's capabilities as a specific field of interest for future research.

### **Background: German MedTech industry**

As a result of significant demographic challenges and fast technological development, the world market for medical technologies currently totals in the region of more than EUR 200 billion per year - a figure that is increasing all the time (Kuhlmann, 2014). As such, Germany is the third largest medical technology provider of products and medical services in the world (Beeres, 2016). The MedTech industry is an important industry sector of the German national economy. It is mainly based on SMEs, which drive innovation and competition. SMEs play an important role regarding the GNP or employment rate and are consequently called the backbone of

German industry (Geyer and Uriep, 2012). Although, most of the German SMEs have foreign business for the future, it will become even more crucial for German SMEs to intensify their international engagement (BDI, 2012).

The governmental German trade and invest agency highlights the medium-sized company oriented structure with niche products for specialist application as unique characteristic of German medical technology. Ninety-seven per cent of all medical technology firms in Germany employ less than 500 employees. These SMEs with less than 500 employees are accountable for roughly 40 % of the total turnover and more than 1,200 companies are active in this medical technology sector (Kuhlmann, 2014).

The medical technology producers in Germany achieve approximately one third of their turnover with products that are less than three years old. More than two-third of the generated revenue in this industry belongs to SMEs (MacDougall, 2012). Medical equipment is used in nearly all medical applications and medical technology products can be found in all stages of human life to support the health of human beings. Not at least with the help of highly innovative medical devices the possibilities in diagnosis, therapy and care have been developed significantly in the last decades, which consequently enable the a positive development of public health in many countries all over the world. Today's products available in this market include a wide range from high-end products, e.g. for diagnostics, therapy and monitoring, to commodities suitable to more general health care provision (Wintermantel, 2009).

The MedTech business worldwide is built up of different highly regulated markets. These regulations differ significantly from country to country along with the lack of harmonization in legal provisions for international standards of regulations. Consequently, the investments for certifications - a prerequisite for entering the market - are significantly increasing (Kramer et al., 2012).

With respect to marketing strategies, this often means delays for meeting the time to market announcements followed by additional market entrance costs and permanent expenses to run the organization in compliance according to the different national standards (Herok, 2009).

Recent research in the context of the MedTech industry emphasizes industry specific factors and concludes that economic success is e.g. more driven by regulatory knowledge than by technology or product-know how (Chatterji, 2009). This is in line with Hawawini et al. (2003), who sees for most firms, i.e., for those that are not notable leaders or losers in their industry, however, the industry effect turns out to be more important for performance than firm-specific factors.

Furthermore, Hoskinson (1999) highlights that theoretical and empirical findings obtained in a particular institutional context are not equally applicable in other countries.

Following the resource-based view, internationalisation can be a challenge especially for SMEs in the MedTech industry. This might be a reason why only a few MedTech SMEs have managed to internationalize their business against global NMEs and local competition in the oversea markets.

Consequently, the following findings from the literature review will start with general SME related findings, then add the focus on SMEs in the MedTech industry and finally reflect country specific factors of such companies. Furthermore, a rationale is developed, as well as an initial framework based on constructs and relationships drawn from the literature.

### **Results from the literature review: Initial framework**

Some scholars emphasize special key factors in the context of economic success and foreign business. Lages et al. (2009) have in their research a focus on quality and innovation as determinants of performance in international ventures. Leonidou and Katsikeas (2010) highlight the relationship of export performance and product innovation. Although competitive products and services are the base for international ventures they have always to be considered in the context of the specific situation regarding market and competition (Theodosiou and Katsikeas, 2013). Hence, also external industry specific factors have a strong impact. The importance of regulations in Healthcare has already been mentioned. Chatterji (2009) highlights that specific environmental factors such as regulations and approvals in the medical markets and the related know-how have a huge impact on the economic success of foreign ventures of SMEs in this industry. Narooz and Child (2017) underpin the importance of networking behaviour in response to specific institutional conditions. They highlight culture as a complex construct defined as the impact of language, education and socialization processes on the mind-set of the respondents. Barney (2010) emphasizes firm resources leading to sustainable competitive advantage by focusing on internal resources like physical capital, human capital, and organizational capital. This is in alignment with Piakowski (2012), who sees managerial factors as crucial in this context. According to the resource-based view, human capital has an essential impact on the internationalization of SMEs, but it is also agreed that financial and human resources are limited in such firms. Onkelinx, Manolova and Edelman (2016) identified that the role of firm-level human capital is of considerable importance for firms that follow a strategy of accelerated internationalization. But also information can be seen as critical resource (Souchon et al., 2003). Katsikeas and Theodosiou (2013) see superior export performance linked to competitive advantages in specific competences and capabilities. These capabilities comprise: organizational learning, relationship capabilities and quality capabilities. Furthermore, such specific organizational capabilities are related to the execution of a certain strategy in order to do successful international business.

As outlined before, a lack of knowledge and capabilities often characterize the situation in SMEs' business in general. This is in line with findings from a survey of the German Chamber of Commerce, in which management knowledge, lack of experience and resources are named as barriers to the internationalisation of German SMEs (Geyer and Uriep, 2012). A survey in the MedTech industry that is focusing on SMEs in the UK gathered interesting results regards motivation, barriers and success factors in the context of internationalization (Barnes et al., 2007). Higher market size, guard own resources by entering more markets and greater profit were named as motivation, whereas finding the right partner, local competition and limited financial and management resources were named as barriers. Product quality and competitiveness as well as an experienced management have been identified as success factors.

Summarized, some factors have direct or indirect influence on firm's strategy and consequently on the economic success of international ventures. Some of these factors are important in a general context, while other factors have a specific weight in the context of SMEs or the MedTech sector.

As a result of a qualitative synthesis based on the findings from the reviewed literature, three different categories of influencing factors can be distinguished.

Product related factors such as product's competitiveness, innovation and quality are named as the base of international ventures and define firm's strategy, Therefore the second order construct, named market specific product potential, represents product related factors such as product competitiveness, product innovation and product quality. Products are the base for international ventures and their characteristics have high impact on firm's strategy in this research context.

But also the market potential and the competition influence a firm's strategy as external factors in general. Regulations are another important external factor in the MedTech business. Hence specific environmental factors such as competition by MNEs or upcoming domestic firms in a foreign market, as well as market potential and medical regulations have a major impact on firm's strategy.

Other findings highlight internal resources like physical capital, human capital, and organizational capital and their impact on the strategy on the internationalization of MedTech SMEs. Often, such firms have fewer skills and resources (Leonidou et al., 2011), which are obstacles in the internationalization process since experience and management skills are seen as important resources. Hence, information and knowledge, firm's resources regarding human and financial capital have been identified as internal factors as well as management skills and experience, which are recognized in the SME context as important representatives of the second-line constructs influencing a firm's strategy approach.

Although the definition which specific variables represent the different categories in this framework will be described later, it can be recognized that a perspective respecting product, firm and environment related factors could group most of the factors extracted from the literature review.

Through the lens of the resource-based view, capabilities are valuable and rare. They can be viewed as bundles of tangible and intangible assets, including a firm's management skills, its organizational processes and routines, and the information and knowledge it controls (Barney, 1991). As a result, organizational capabilities have been identified as crucial and therefore shaped and detailed in the specific research context. Consequently, specific capabilities have been identified that are represented learning, relationship and coordination mechanism as representatives. Finally, these different capabilities can be combined in a second order construct named organizational capabilities, which is supposed to have a moderating effect on both, the development and the implementation of firm's internationalization strategy.

## Research design

The purpose of conducting scientific research is to contribute to knowledge. All research is based on assumptions about how the world is perceived and how it could be understood in the best way (Trochim and Donnelly, 2007). This means that researcher's philosophical perspective on science influences the research and knowledge contributed. Accordingly, the research design is related to the ontological view, focusing on the beliefs about the real world which is being researched, and to the epistemology, meaning the knowledge that is required and seen by the researcher (Alrafi, 2007). The researcher's philosophical perspective can be characterized as a post positivist, with a foundation in critical realism which claims that a reality can exist independently from our knowledge of it, but also recognises that concepts in social sciences are constructed by humans and are thus subjective (Bryman and Bell, 2007). The related epistemological paradigm can be described as a modified objectivist, characterized by its critical tradition and assuming that findings are probably true. Following Kumar (2005), methodology consists of practical ways or methods used to gain knowledge. Based on the underlying paradigms the philosophical and theoretical framework leads to a methodology that covers falsification of hypotheses, but also includes qualitative methods.

The basic research design will include three steps: literature review, focus group-interview and a quantitative study based on a internet-mediated survey:

In the first step the literature review delivers the basic psychological and behavioural models as well as potential determinants from previous studies partially in a different or more general context.

Thus in the second step, qualitative data derived from a focus group-interview is employed to elicit individual beliefs that are related to the industry-specific influencing factors on the internationalisation strategy of German SMEs. These determinants will be matched against the determinants that evolved from the literature review.

Finally, the third step is a quantitative study based on internet-mediated survey, where variables are used to answer research questions that present a systematic view of phenomena by specifying relations among variables.

The combination of an exploratory and explanatory approach, in order to strengthen research design, fits to post-positivist philosophical approach and the nature of the research questions and the intended process of generating evidence.

## Results from the focus group discussion

A focus group is a controlled group interview of a target audience demographic, often led by a facilitator. The purpose is to obtain information of a qualitative nature from a predetermined and limited number of people (Krueger, 2008). A set series of questions or topics are covered and the results can provide a dimension that is simply unavailable with the traditional survey approach (Vigniali et al., 2013). Lindlof and Taylor (2002) imply that group discussion produces data and insights that would be less accessible without interaction found in a group setting - listening to others' verbalized experiences stimulates memories, ideas, and experiences in participants.

During the focus group discussion 10 subject-matter experts discussed antecedents, influencing factors and important ingredients for successful international ventures of German MedTech SMEs. Each of the participants had a profound business experience of more than 15 years, whereof at least 5 years in the MedTech industry. Most of them held or held a management position such as founder, CEO or manager in SMEs with international business activities, in addition many of them had also experience in the management of MNEs or as consultants and therefore, all of them could make significant contributions by their own experience. Due to the selection of the participants most aspects along the value chain could be considered as well as their specific impact compared with other industries or MNEs.

There was a fruitful discussion and it can be summarized that many of the identified factors from the literature review could be confirmed as being significant. Some factors which have been considered as less important had to be replaced by new factors. These new factors have been integrated and the initial frame work was adapted.

As findings the factor “processes” was adopted as a firm specific resource factor, whereas the factor “cooperation” was adopted as an external industry specific factor. Also the impact of organizational capabilities could be confirmed. “Cultural understanding” was considered to have a high impact and therefore has been adapted as moderating variable of the construct “organizational capabilities”. “Operational excellence” was named also as an important factor and has also been adapted in the construct “organizational capabilities”

### **Results from the internet-mediated survey**

Based on the initial framework a survey instrument has been developed that integrated the results from the qualitative focus group discussion and the literature review. An internet-mediated questionnaire approach was chosen in order to use established communication channels and platforms of the MedTech community. With respect to the design of the questionnaire several iteration loops were performed with respect to content, layout and operationalization of the survey questions. The rules of Dilman (2000) regarding the design of a survey-questionnaire have been followed in order to harmonize the different needs from world of academia, statistical market research and the intended respondents from the MedTech management. Special attention was devoted to the questionnaire layout, the cover letter and the question sequence, which certainly contributed to achieve the targeted response rate.

In sum, 26 items had been derived based the previous qualitative approach, which have been operationalized and grouped in 10 main question sections, and reflected by the psychological constructs. Alongside these, 5 further items were developed to measure background variables such firm-size and international involvement. Finally, by modelling the relation between the constructs and the representing factors research hypotheses have been developed and formulated.

Since firm’s strategic information was part of the research the confidentiality and anonymity of the respondents had to be respected. Based on the survey platform ‘research.net’, which is widely accepted in academic research and provides an industry-leading data security, a sample population which is truly representative of the target population of German MedTech companies was intended to be addressed.



Particularly a sufficiently large and representative sample of the target group combined with a high response rate lead to a specific sampling and operationalization approach of the survey. This was realized by selecting respondents from one of the most important medical industry clusters in North of Germany called 'Life Sciences NORD' including more than 240 medical technology companies in this region. They represent approx. 10-15 % of the German Medtech industry in terms of turnover, employees or number of firms. Specifically, the SMEs in this cluster are the main economic contributors and consequently 68.7% of the cluster's value-added activities were produced by SMEs (Ostwald et al., 2015).

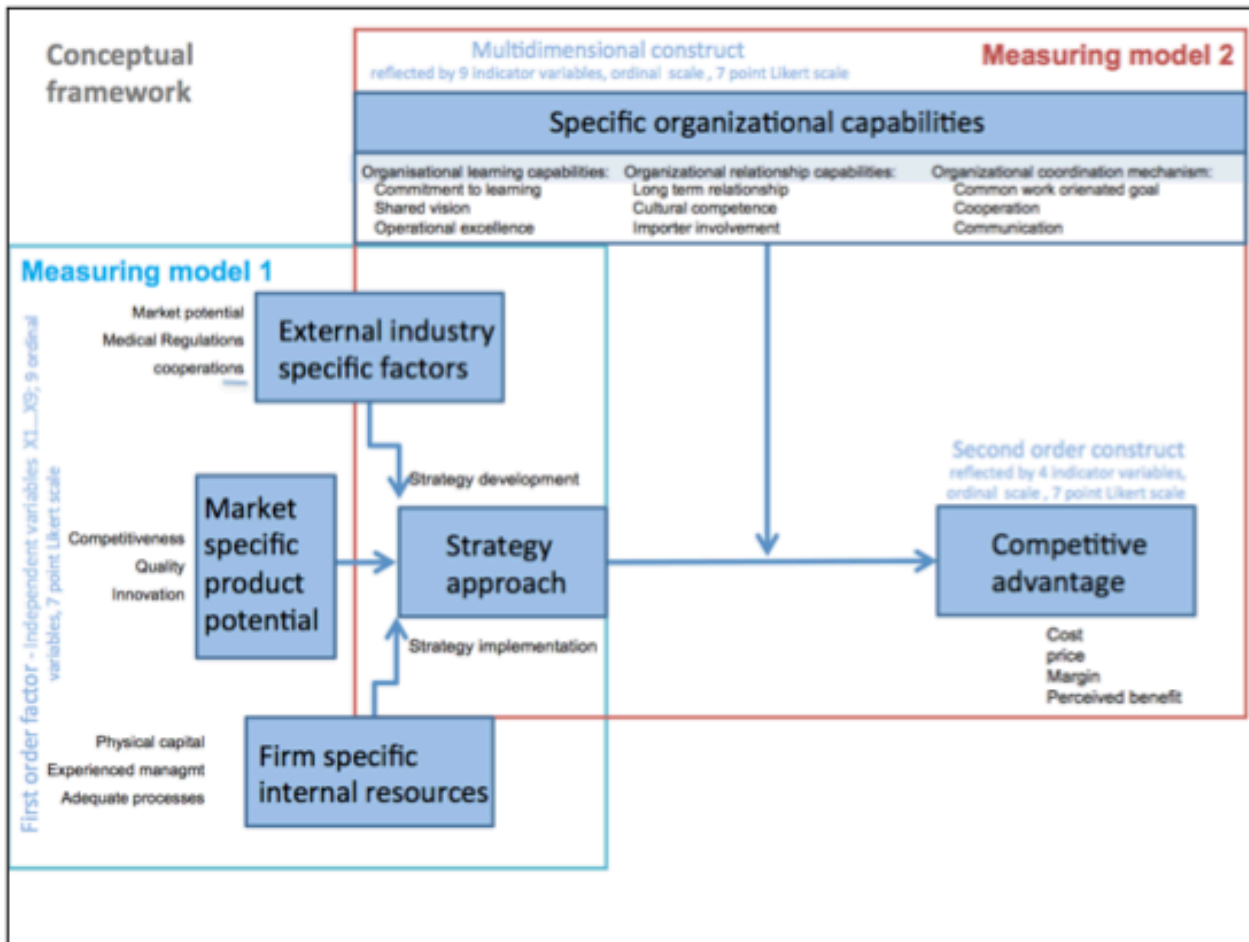
The likely response rate based on a mail survey is described in the literature with 30% as reasonable, whereas via internet, it is indicated with 11% or lower (Saunders et al., 2009). In total, 65 respondents started the questionnaire, of whom 65 finished it. The datasets were exported directly from research.net into an SPSS file. Each item of the psychological construct was measured on a seven-point Likert scale and the resulting scales were consequently used in an explorative factor analysis. A reliability analysis of the factors confirmed a sufficient reliability of the measurement models. The resulting data was interpreted by applying appropriate statistical tests and procedures.

In a next step, structural equation modelling (SEM) was applied to test the conceptual model as it is widely used in social science for showing potential causal dependencies between variables and for demonstrating the relations between variables and their indicators. Therefore the measurement model and the structural model was evaluated in different steps e.g. by factor analysis and as a software tools Smart-PLS 2 was used. The assessment of measurement model proprieties was analysed by the structural model using partial least squares as recommended by Ringle (2005) because it is more robust also for small sample sizes. Figure 1 shows the related measuring model that is applied in order to investigate causal relationships between variables, which cannot be measured with a multiple regression model directly, due to their interference with observed variables. It is a common understanding that multiple regression analysis is applied in order to explore dependencies and to test hypothesis.

According to the measuring model 1 above, quantitative research was interested in relationship and effects between 9 independent variables ( $x_1 \dots x_9$ ) and two dependent variables (Y1a and Y1b). Therefore a regression-based approach (multiple regression analysis) and factor analysis (EFA and Cronbach alpha (reliability)) was used for creating factors (single dependent variables) Two separate regression models have been created (for dependent variable/factor Y1a and Y1b). Pearson's test for correlation and two-tail significance testing provide evidence regarding correlation. With a factor analysis it was tested if the correlation can be traced back to few variables. In statistical testing it is crucial to test validity and reliability. Cronbach's alpha test was used as an indicator for reliability. An exploratory factor analysis (EFA) was performed for creating factors representing constructs of single dependent variables. Two separate regression models were created (for dependent variable/factor Y1a and Y1b). For evaluating the results of the factor analysis the so-called sampling adequacy with the help of the Kaiser-Meyer-Olkin test (KMO) and by Bartlett's test of sphericity was assessed. The factor analysis of variance (ANOVA) explored if the model was good enough for prediction and finally it was examined

whether variables have statistically significant effect on the concepts, so that hypotheses could be rejected or accepted.

**Figure 1: Measuring models**



Second, the quantitative research had interest in causal relationships and effects with latent variables/constructs. Measuring model 2 shows, that in detail 2 direct effects and a few moderating/mediating effects of 3 constructs regarding strategy, capabilities and competitive advantage were tested. Therefore an SEM approach was used, due to small samples the PLS method with bootstrapping was applied. First a factor analysis (EFA and Cronbach alpha) and CFA for creation of 6 constructs was conducted. While the Cronbach's alpha coefficient evaluates the overall reliability of the model, other measures show how well a single indicator fits within the model. According to Jais (2007), there are various tests to indicate a good fit and a high convergent validity of the item under investigation. Hence, for each construct convergent and discriminant validity was checked, before usage in SEM model. In the process of CFA analysis and SEM model testing the statistical assessment was performed on base of statistical indicators such as the  $\chi^2$ , GFI (Goodness of Fit Index), CFI (Comparative Fit Index), RMSEA, regression weights (C.R. with p), R-square (squared multiple correlations), AVE (average variance extracted).

The analysis of the results from measuring model 1 gave evidence that factors such as 'market potential', 'physical capital', 'medical regulations' and 'product competitiveness' have the highest influence on the firm's strategic approach.

The impact on the strategy-competitive advantage relation is demonstrated by the results of measuring model 2. For the concepts of 'Organizational learning', as well as for 'Organizational coordination mechanism' and 'Organizational relationship capabilities' all standard regression weights were high enough and significant; furthermore all factors were statistically significant correlated, and consequently the constructs were accepted as reliable and of good convergent validity. The component matrix showed that for the concept 'Organizational learning' the item 'total agreement on business unit's vision and values across all levels and functions', formulated as one question in the questionnaire, had the highest factor score of the three items. For the concept 'Organizational coordination mechanism' the item 'Functional areas in this company work together in pursuing a common goal', formulated as another question in the questionnaire, had the highest score, which indicates the importance of being aligned and having directions based on an overall strategy. For the concept 'Organizational relationship capabilities' the item 'Our firm pays close attention in establishing and maintaining strong business ties with other organizations in foreign markets', representation a further question in the questionnaire, had the highest score, which indicates that cooperation plays an important role as soon as foreign business has been established, whereas the item 'Our firm places a high value on open-mindedness towards our foreign partners' culture' seems to have the lowest factor score. This is surprising since the cultural aspect was highlighted in the focus-group discussion.

Summarized, this means that 'Organizational learning' and 'coordination mechanism' have particularly an impact on strategy development, whereas relationship capabilities have a mediating effect on the strategy-competitive advantage relationship.

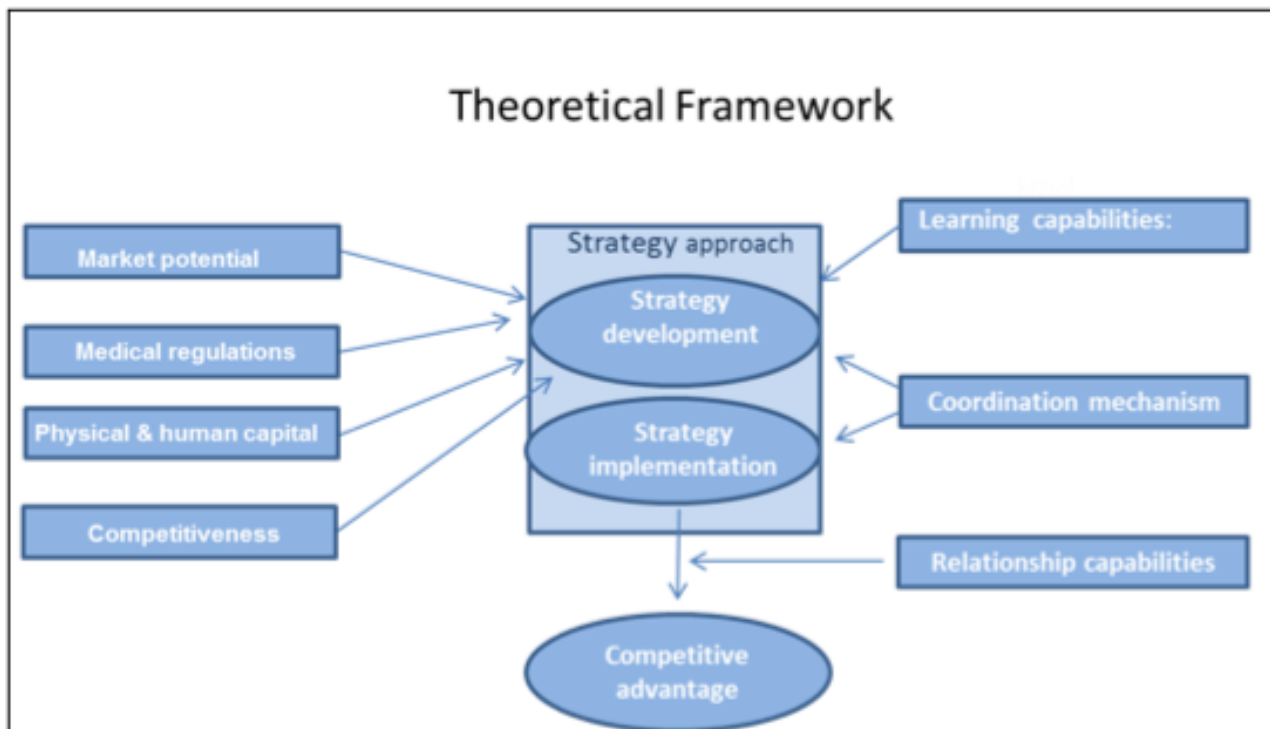
Furthermore, background variables such as firm size and the degree of involvement in international ventures have an impact particularly with respect with SME's perception regarding competition, their own positioning and international ventures.

### **Resulting empirical model**

The interpretation of the resulting data, using a regression model based on a factor analysis, resulted in a theoretical framework represented by a final empirical model for the internationalisation of German MedTech SMEs.

Figure 2 shows the empirical model, which is based on the results from the quantitative research and the hypothesis testing as described before. The mixed method provided an opportunity to test the potential influence of various descriptive variables on predictor and dependent variables and consequently on firm's strategic approach towards internationalisation, which will be discussed next.

Figure 2: Final model



## Discussion

So far, the different findings from the sequential steps of the research have been presented. Now, the role of the predictors derived from the quantitative data analysis will be discussed based on the overall research results. This means that results from the literature review and the qualitative interviews will be employed together with the quantitative results in order to arrive at a comprehensive and detailed picture of the proposed predictor structure. A summary of the main findings show as key aspects that:

- Resources with respect to employees and management as well as provisions for a sufficient amount of capital are the most important determinants for the development of an adequate strategy for international ventures.
- Market potential in foreign countries is an antecedent for the development of an internationalisation strategy.
- Medical regulations and product competitiveness have a particular impact on international ventures of German MedTech SMEs.
- Firms, who perceive barriers regarding the competitiveness of their products in or the related medical regulations of foreign countries, are significantly less likely to adapt an internationalisation strategy.
- Organizational learning and coordination mechanism have a positive effect on strategy development in the context of internationalisation.
- Competitive advantage in international ventures increases with the degree of the implementation of an international strategy
- Relationship capabilities strengthen the effect of strategy implementation on competitive advantage with respect to international ventures.
- Firm size and firm's experience in international ventures have an influence on firm's internationalisation. Those organizations with less international business,

which are mainly SMEs, experience the barriers as higher compared to those who are significantly involved in international business.

The assessment of influencing factors on strategy development and strategy implementation in the context of SME's internationalization leads to a distinguished picture with respect to the weight and importance of the different factors.

The strong positive impact of the factor 'market potential' (reflected by the hypothesis H3) is not particularly surprising and was already postulated as an outcome of the literature review. The quantitative results confirm also the qualitative results from the focus group discussion, where this factor was also ranked as important by 40% of the participating experts. This is in line with Aaker and McLoughlin (2010), who highlight market potential as an antecedent represented in most prominent analytical tools represented as market size (current and future), market trends, market growth rate, market profitability and various other key performance indicators.. Hence, from a theoretical, practical and statistical point of view this influencing factor can be confirmed for the specific research context.

The impact of human and physical capital was reflected by the hypothesis (H9), which has been accepted. Particularly in the context of SME's internationalisation the positive relation is not surprising either since it was already postulated in the theoretical work of Pfeffer and Salancik (1978) and in the resource-based view as a theory, which has been formalised by Barney (1991). The lack of resources and financial resources were also identified as barriers based on a survey among German SMEs as well as among MedTech firms in the UK and has already been discussed in detail during the literature review (Geyer and Uriep, 2012; Barnes et al. 2007). Also, the qualitative results from the focus group discussion are confirmed by this quantitative survey, since this factor was ranked as highly important by 60% of the participating experts. Therefore, it can be identified as a major influencing factor in this research context, confirmed by qualitative and quantitative methods.

The statistical test proposed, that product related-factors such as quality or innovation have no significant impact on the development of firm's strategy. The supposed underlying mechanism that good products, which allow a differentiation from competitors, facilitate international ventures could not be confirmed, although at least innovation was ranked high in the qualitative focus group discussion. However, other product-specific and industry-specific factors represented by the hypotheses (H4, H6) can be highlighted, particularly the effect of medical regulations. This means, the bigger the medical regulation challenges, the worse is the development towards an international strategy; in other words, medical regulations can be a barrier, particularly for SMEs in the MedTech industry when willing to internationalize their business in foreign markets in a challenging regulatory environment. The specific role of regulations is not only supported by the literature (Chatterji, 2009), but also by 40% of the experts from the focus group discussion.

The effect of the factor 'competitiveness' was formulated in hypotheses (H6) suggesting that "The lower the competitiveness of a product, the lower is the development of a strategy (to market the product internationally)". But H6 was rejected contrary to expectations with respect to its statistical significance. However, cross-tabulations have shown that more than 80% of all respondents at least partially agree to follow a strategy, but only half of them see their products as competitive.

Consequently only half of the respondents would have the base for developing a strategy for their international ventures due to the lack of product competitiveness. This is in line with Lages et al. (2009) who see competitive products as an antecedent to act successfully in international markets. Also other recent empirical research identified competitive products as a success factor in a similar research context, i. e. in the internationalisation of MedTech SMEs in the UK (Barnes et al., 2007). Hence, the impact of product competitiveness in this specific research context has been identified during the literature review and, in addition, the qualitative research showed that 50% of the experts from the focus group discussion ranked this factor as highly important.

Summarized, internal (firm-specific), external (market-specific) and product related factors influence firm's strategic approach. Particularly market potential, physical resources, medical regulations and product competitiveness have a particular impact on international ventures of German MedTech SMEs.

It has already been highlighted that organizational capabilities have impact on firm's strategy, since organizational learning capabilities are necessary to transform knowledge into value creation. To achieve this transformation in a most efficient and effective way, coordinating capabilities help to steer all internal and external activities and assure adequate communication regarding the related interactions. This is in line with previous research where organizational relationship capabilities are seen as crucial for networking and collaboration with foreign partners, since they help to overcome the lack of knowledge, resources and capabilities of SMEs.

Consequently, the effect of strategy on competitive advantage (H1b) was confirmed regarding strategy implantation and the moderating role of relationship capabilities (H2d) became evident. This means, that competitive advantage in an international venture increases with the degree of the implementation of an international strategy, while relationship capabilities strengthen the effect of strategy implementation on competitive advantage. Furthermore, the effect of organizational learning and coordination mechanism on strategy became evident, although their moderating effect on the relationship strategy-competitive advantage could not be confirmed.

Although the reviewed literature suggests that performance in international ventures is related to strategy, H1b has been accepted, whereas H1a has been rejected. Hence, the causal relationship between strategy development and competitive advantage was not confirmed. This was unexpected since other empirical research (Lages 2009; Aaby and Slater 1989) provides evidence of the link between strategy and competitive advantage. But in those models, the concept of strategy is not distinguished between planning and implementation, so that there is basically no contradiction. Furthermore, it has already been addressed that there is still a significant amount of SMEs in Germany that do not have implemented a formal strategy planning (Martin, 2005). It also has been noticed that those, who base their decision on formal processes and tend to more rationale and objective based decision modes come to different prioritizations regarding decision factors towards internationalisation.

Cross-tabulations have shown that more than 80% of all respondents at least partially agree to follow a strategy, but the majority of these firms being involved in international business only for 1-5 years. Consequently, more than one half of the

respondents answer to have a low percentage of sales derived from international ventures ( $\leq 25\%$ ). The majority of them would, according to the definition of the EU, count as a SME ( $< 250$  employees) and consider their products not as better than that of their competitors. More than 50% of the firms see their production cost as comparable or higher in comparison to their competitors and assume that they can't enforce higher prices. Hence, these SMEs have a perceived barrier to increase their involvement in foreign markets.

Consequently, it is not surprising that based on these responses the concept strategy development is not directly linked with competitive advantage in the context of internationalisation. Many of the respondents develop a strategy, but due to different prioritizations this does not foster firm's internationalisation. This is confirmed by the findings from Martin (2005), who did a survey on several hundreds of SMEs in Germany and revealed that the ratio regarding those SMEs that follow strictly a growth strategy (41%) and those that concentrate on existing markets (46%) is quite heterogeneous.

It can be summarized that, although the effect of strategy towards competitive advantage could be statistically confirmed only partially, there is no basic contradiction and there is an explanation for the statistical result. Hence, the model and overall effect can be basically seen as confirmed.

Regarding the influence of background variables the findings from the quantitative data analysis and from the results based on the qualitative interviews and the literature review show interesting results. According to Leonidou et al. (2011) small firms have less competent management and fewer skills to support foreign ventures effectively, compared to with large firms. Furthermore, firms with limited business experience have fewer resources and capabilities to advance their strategies. (Venkatraman et al., 1990). Consequently, the interrelation of specific background factors, such as firm size and international involvement, is discussed with respect to their impact on the survey results. Nearly 70% of the responding firms can be grouped as SMEs according to the definition of the EU ( $< 250$  employees), but only 20% of them state to have a percentage of international sales higher than 25%. Consequently, most of the firms with a significant international involvement belong to firm's with 250 employees and more. This means, that both, SMEs and larger firms are represented in this survey according to the target population, but that firm size and international experience might have had an impact on respondent's evaluation regarding influencing factors.

As a result of the focus group discussion, co-operations have been highlighted as an important factor. Based on cross-tabulations involving underlying descriptive data, firm size and experience in international ventures seem to matter. Those organizations with less international business experience the importance of international co-operations as lower compared to those who are deeply involved in international business. Hence, co-operations might have an impact, but finally could not be confirmed by this research due to statistical reasons that are finally based on sample size and distribution of responses.

As discussed before, quality and innovation as determinants of strategy and performance in international ventures could not be confirmed, although Leonidou and Katsikeas (2010) gave evidence regards the importance of these factors in the

context of international ventures. Based on cross-tabulations, it is supposed that again firm's international experience is the reason for a different perception of the respondents, since those firms concentrating on the German market compare their products with other competitors than those firms acting internationally.

### **Implications and propositions for further research**

In sum, the present research has provided a contribution to knowledge that is highly relevant from an academic as well as from an economic point of view. The study contributed to the theoretical discussion in the field of strategy and internationalisation, as well as to the methodological discussions in the broader field of social sciences. By developing a framework for SMEs internationalisation in the MedTech industry the study provides guidelines for further research in this field. Most importantly, however, the resulting framework will support the industry as well as the governmental institutions and policymakers with an interpretive understanding of the decisive determinants for increasing international ventures in the context of German MedTech SMEs.

The results of the research have several theoretical, managerial and economic implications. The theoretical implication of the research is based on the development of predictors in the present study not only anchored on previous theoretical and empirical work, but also on extensive qualitative research, presenting a new and unique model. The methodological implications are based on the results of the present study, which provide a clear justification for continuing to apply methods triangulation in a field of strategy and innovation, which is highly multifaceted and heterogeneous. Managerial and practical implications refer to country-specific governmental programs or institutions, which may be beneficial. However, the association between the use of such programs and firm's performance is not direct but rather achieved through an enhancement of firms resources and capabilities required to operate internationally. Hence, managers must be aware and appreciate their usefulness. Of specific importance in this context is the ability to implement and maintain strong business ties between international partners and therefore organizational capabilities are required.

Regarding the economical and governmental implications, it can be summarized that governmental institutions should focus on generating awareness-knowledge by supporting local-level initiatives and regional cluster organizations. Thus government has to act as a change agent, whose assistance facilitates firm's adoption of a more systematic, proactive and planned approach. Collaboration within a firm and within an industry is crucial. Managers and government should facilitate a close collaboration, enabled by regional networks. High-quality experts supporting know-how transfer and providing consultancy need to commit their engagement in such roles.

A near understanding between public and academia can furthermore have a positive spirit on the international education of managers in order to prepare for the future.

Throughout the course of this research, potential gaps in knowledge were identified and, if possible, filled with new insights based on reading or empirical data. Due to the clearly defined focus of the present thesis, a substantial number of gaps in knowledge in related fields were identified and should be addressed by further research. Since the scope of the present research are MedTech SMEs on the



German market, the application of the derived predictor structure in related fields of similar industries could provide an insight into the generalisability of the findings and the universality of the developed conceptual model. Furthermore, the application of the model in different geographical or cultural environments could provide an important contribution to the question of whether and how SMEs internationalisation is affected by cultural factors. The analysis of group differences revealed that firm size and experience in international ventures have an influence on the perceived base of operations. Due to the limited sample size and conceptual limitations, the question of how these factors influence the results could not be answered with absolute certainty. Further research should conduct different regression models based on firm size and experience in international ventures. Another fruitful avenue for research could be the research on the influence of firm size and international experience to add deeper insights.

Furthermore, the evidence of potential moderating or mediating effects of the factors 'organizational learning' and 'steering mechanism' could deliver a substantial contribution to knowledge. Based on the methodological approach of this thesis, the author clearly advocates the increased application of a mixed-methods approach in operational research. The application of a more explorative qualitative stage could enable further research to obtain a more comprehensive understanding of the concepts involved in decisions in the field of strategy, SMEs and internationalisation.

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