Serbian Economy and New Digital Business Environment

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"The digital society represents an irreversible trend.

Riding on the trend to establish competitive strengths for today and the future, and embracing digital reformation by applying the Internet mindset and ICT technologies, becomes an inevitable choice.

Such reformation toward digital is not about just using the Internet as a tool; it is far more comprehensive and profound."

Huawei COMPANY

Introduction

- This paper examines new digital business environment characterised by implementation of advanced digital technologies currently under the impact of "forth industrial revolution"
- In the focus of analysis is Serbian readiness to develop digital economy in order to accelerate its economic development, place products and services on global market wit higher competitiveness level and become full member of EU
- Several key measuring indicators are analyzed and compared

New business environment

- Information communication technologies as the key general purpose technology affecte almost every aspect of economic and social activities.
- Positive effects from ICT on economy, business growth, and living standards
- Developed and developing countries

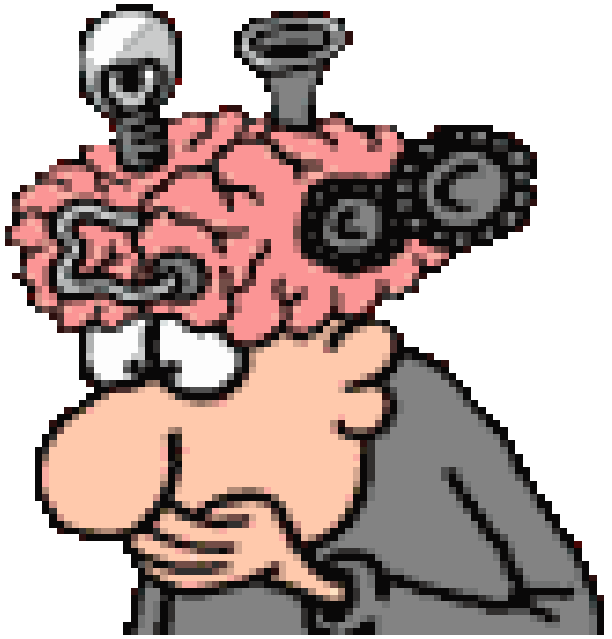
trying to tap all the innovation and growth opportunities offered by ICT implementation

in different sectors of national economy and society.

Digital economy is developing rapidly worldwide

DE contributes up to 8% of GDP in G-20 countries

ICT sector contribute with 40% to totally productivity growth in Europe



Where we go?

- Industrial society

- Information society

- **Smart better connected world**

Fourth industrial revolution

- The 19th and 20th centuries saw three industrial revolutions – mechanization, electrification, and automation.
- The 21st is seeing the fourth – digitization
- New industrial revolution will change both how industries produce, and how they do business.
- With the reach of broadband expanding, and everything else smartening up, new industry ecosystems are being created
- Business landscape is reshaped to suit the needs of the information era.

THE SECOND WAVE **of advanced accelerating technologies**

- Are in the essence of this industrial revolution
- These technologies are crucial tools to enable a smart, sustainable and inclusive economy in the future

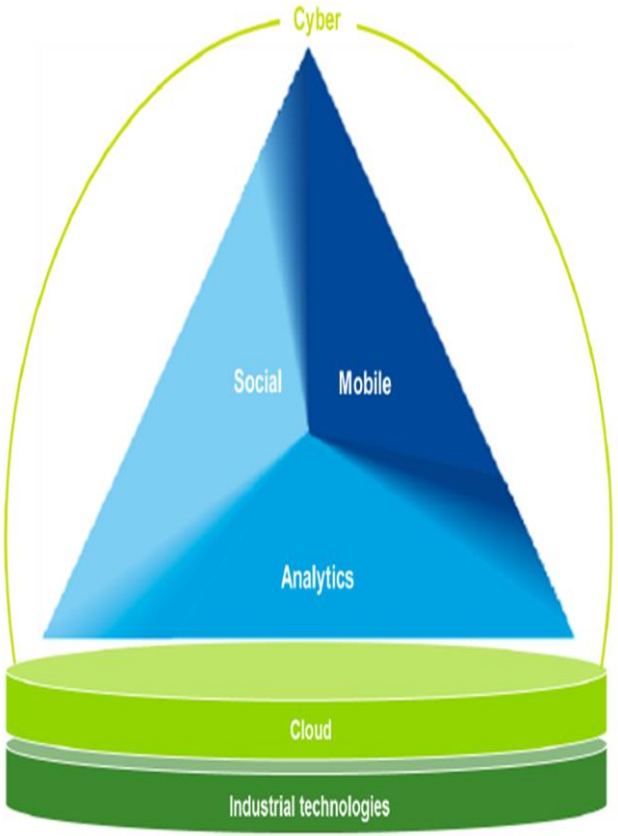
Table II. The second wave of new digital technologies

Mobility and mobile apps: Technologies that enable voice and data connections between people, and increasingly between objects, while on the move. Applications that take advantage of this and in some cases make use of location data.
Social media: Enterprise social media describes companies' use of social media tools for business purpose. These tools may include social networks (e.g. Facebook, LinkedIn, etc.), microblogging (e.g. Twitter), blogs, internal wikis and/or other enterprise collaborative software.
Cloud: cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, software, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.
The Internet of Things (IoT): describes the network of physical objects that feature an IP address for Internet connectivity, and the communication that occurs between these objects and other Internet-enabled devices and systems.

Industrial revolution: Empowerment through ubiquitous connectivity

- According to some authors this is the biggest transformation in business the world has seen in over a century
- The untapped potentials of these technologies are enormous and they represent big challenge for companies and industries in country.
- Companies able to make use of this second wave of advanced accelerating technologies, and by doing so, are performing 10 times better than their peers.

Figure 1 – Digital technology trends



Digital disruption’

- refers to changes, both positive and threatening, and will affect industries in three ways:

☐ Customer insights combined with the ability to reach out to customers more effectively.

☐ Operating models - the way daily operations and processes are organized.

☐ Business models - the way value is created, delivered and captured.

New digital developments can

- improve the way new innovative products and services are conceived, developed, produced and accessed.
- enable businesses to faster develop and bring to market innovative products and services
- help to totally re-shape value chains,
- sharpen market intelligence,
- improve efficiency,
- reduce time-to-market
- increase customer satisfaction
- make SMEs to go global from day one, reaching overseas markets and talent pools instantly.

EU and new digital economy

- The transition to a digital economy is essential for Europe's competitive edge and to deliver much needed economic growth and jobs.
- The digital economy is an important priority for the Barosso II Commission and it is at the core of the new Europe 2020 strategy
- "A digital agenda for Europe" is one of the three proposed flagship initiatives to generate smart growth in Europe
- EU estimate that at least 4 percent additional GDP (EU27) can be gained in the longer run by stimulating further adoption of ICT and digital services through the creation of a DSM.
- Declaration on the digital transformation of European industry and enterprises – February 2016

Serbia and new digital economy!

- The role of ICT in the new growth model of Serbian economy
- ICT as a new sources of growth that will enable further reform, modernization and innovation in order to boost growth rates and create employment
- ICT implementation as precondition for EU membership

Economic crisis and digital economy in Serbia

Serbia faced with:

- **Slow economic growth**
- **rising unemployment** and **worsening living standard** of their citizens.
- **exports and capital inflows declined**, causing **difficult fiscal challenges** and **rising levels of public debt**.
- The need for a change in a growth model
- Growth model based on cheap inflows of foreign capital to fund credit booms, was inherently risky and unsustainable

Why Serbia need digital economy?

ICT as a part of solution	**Serbia suffers from these key barriers:**	**Policy attention should be on:**
Serbia needs new source of growth	Lack of policy attention	ICT should be a key priority for Serbia
A severe lack of productivity, lack of competition and growth	Businesses find it difficult to operate in the new ICT based manner, markets are closed and monopolized	ICT transformation of companies and liberalization of markets
Low level of innovation	Decreasing R&D activities, number of researchers, brain drain,	Increase investment in education, research and development especially in ICT
High unemployment levels	Jobs lost in the process of privatization, young unemployment	Active labor market policies, skills, life-long learning and education
Inefficient and expensive state	Low productivity of public sector	Support e-government development
Transforming the Serbian economy to a digital economy	Lack of awareness about ICT potentials and risks	Create ICT supportive environment

Progress towards digital economy in Serbia and comparison with some SEE countries

- By using and comparing some key infrastructure development indicators
- The collecting and comparing these data was possible as selected countries base their statistics in information society area on Eurostat methodology.
- The aim was to follow the progress in the development of digital economy and society in this part of SEE region in the framework of European digital agenda tasks.

Table III. Fix and mobile subscriptions

	HR	MK	ME	RS	BA	EU28
Fixed lines per 100 population						
2010	39,3	20,2	27,7	41,4	24,7	40*
2014	35,0	18,93	26,6	39,6	22,2	38,3
Mobile subscriptions per 100 population						
2010	143,5	106,1	173,9	132	87,5	124,4*
2014	104,0	108,69	163,8	130,04	90,0	120,5

Table IV Fix and mobile broadband subscriptions

	HR	MK	ME	RS	BA	Europe
Fixed broadband subscriptions per 100 inhabitants						
2012	18,3	12,5	8,3	11,2	8,2	25,7
2014	20,7	13,7	8,4	12,9	10,6	28,6
2015	21,5	15,1	12,8	14,2	-	29,6
Mobile broadband subscriptions per 100 inhabitants						
2012	15,5	6,5	22,0	4,1	9,2*	54,2
2014	53,9	25,1	27,5	52,1	12,2	69,3
2015	65,3	38,0	23,1	53,7	-	78,2

Table V. Use of Internet - individuals and households

	HR	MK	ME	RS	BA	EU28
Internet use by individuals %						
2010	54	52	37,5	40,9	42,7	68
2014	69	68	64,5	62,5	60,8	78
2015	70	70	67,2	65,8	-	79
Households with Internet access at home						
2010	56	46	51,4	39,0	29,8	70
2014	68	68	63,6	62,8	47,5	81
2015	77	69	67,5	63,8	-	83

Table VI. Use of Internet-companies

Enterprises with Internet access						
	HR	MK	ME	RS	BA	EU28
2010	95	84	95	96,8	-	94
2014	96	93	98	100	-	97
2015	90	93	99	99,1	-	97
Enterprises with WEB sites						
2010	61	43	-	67,5	-	67
2014	66	53	73.3	74	63,2	74
2015	71	52	74,3	75,2	-	75

Table VII. E-commerce and use of e-services

	EU-28	HR	SR	MK	MN
Individuals					
% of individuals using the Internet for interaction with public authorities					
2010	41	19	-	14	-
2014	47	32	37,4	27	22,0
2015	46	35	27,8	23	31,3
% of individuals using e-banking services					
2010	36	20	-	4	-
2014	44	28	13,5	9	-
2015	48	33	-	17,6	-
% of individuals using the Internet for ordering goods or services					
2010.	40	14	6,1	4	-
2014.	50	28	21,6	11	7
2015.	53	31	22,7	11	10,1

Table VIII. E-commerce and use of e-services

Enterprises					
	EU-28	HR	SR	MK	MN
% of Enterprises using the Internet for interaction with public authorities					
2013	87	88	87,6	74	-
2014	88	93	92,0	77	-
% Enterprises receiving orders online (at least 1%)					
2010	13	22	20,7**	4	8,1,*
2014	15	-	22,9	5	14,7
2015	17	20	-	7,7,	24,3
% Enterprises purchasing online (at least 1%)					
2010	-	23	40,1**	4	11,7*
2014	-	-	40,3	4	24,3
2015	-	11	-	3	24,1
% Enterprises using ERP					
2010	-	15	-	9	-
2014	-	18	16,2	22	43,8
2015	-	29	-	18	43,8
% Enterprises using CRM					
2010	17	11	-	11	-
2014	20	12	14,9	16	38,2
2015	21	15	-	14	37,7
% Enterprises using cloud services					
2014	32	16	3,2	-	12,5

Table IX . Network readiness index

NRI	SR	MN	HR	BIH	MK
2009/2010 (138)	94	42	51	110	73
2010/2011(138)	93	44	54	110	72
2012 (142)	85	46	45	84	66
2013 (144)	87	48	45	78	67
2014 (148)	80	52	46	68	57
2015 (143)	77	56	54	-	47

IN line with Serbian 94th positon on
the Global Competitiveness Index List 2014-2015,
as ICT implementation is one of the key contribution factor
to the country`s competitiveness level.

What data show

- Serbia have created a good basement for digital economy development
- ICTs are becoming increasingly affordable in our economy.

- NRI ranking represent complex Serbian ICT reality-**identifying the common factors that unable effective use of technology**

- It proves that Serbia is more or less lagging in efforts and commitment to fully develop and leverage ICTs to boost its economic development and competitiveness

Serbia is in sc. „new digital divide“

- The country have not enough capabilities and capacity to:

A) Realize the real impact of ICT implementation on transformation its economy and society

B) Use ICT potentials in order to enable sustainable economic growth and improve the business quality of domestic enterprises

Conclusion 1.

- Serbia is still at the beginning of digitalization process in its economy and society as the speed with which we have applied and use these technologies was not high enough.
- OUR competitors do it much faster!

Conclusion 2.

- Serbia has the basement for DE development but infrastructure, organization and human resource frameworks have to be further improved in order to enable:

a) Domestic enterprises to do their business more competitive through the ICT use
b) National economy to realize long-term dynamic economic growth

Important conditions to be fulfilled and in Serbia are:

- Infrastructure availability,
- Educated work force,
- Proper legal framework and
- Simulative business environment

Five important tasks on the transformation road to digitally driven economy

- 1. **Increase industry digital transformation**
- 2. **Create a digital entrepreneurial culture**
- 3. **Attract, develop and retain high-end digital skills and talent**
- 4. **Ease the access to finance and enhance investments**
- 5. **Boost the digitally powered market**

One of the primary tasks for Serbian government should be the accelerating digital transformation as it presents enormous growth potential for Serbia and the condition for EU membership!

THANK YOU!

ANY QUESTIONS?