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Cloud Computing Adoption Business Model Factors: Does Enterprise Size Matter?

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This paper presents the results of research investigating the impact of business model factors on cloud computing adoption. The introduced research model consists of 40 cloud computing business model factors, grouped into eight factor groups. Their impact and importance for cloud computing adoption were investigated among enterpirses in Slovenia. Furthermore, differences in opinion according to enterprise size were investigated. Research results show no statistically significant impacts of investigated business model factor groups to cloud computing adoption. Nevertheless, based on slope coefficient directions and statistics values, some factor groups can be recognized as having moderate or strong, positive impact on cloud computing adoption; although their impact cannot be statistically confirmed with 95 % or 90 % levels of confidence. Furthermore, significant differences in opinion about the importance of business model factor groups and factors to cloud computing adoption according to enterprises size have been identified. The results represent a contribution to the theory of cloud computing adoption from the perspective of the provider's business model. In addition, findings provide orientation for innovation of existing business models towards the creation of a customer-oriented business model for more successful exploitation of cloud computing services and new business opportunities.

Keywords: *Cloud Computing Adoption, Business Model Factors, SMEs and Large Companies.*

Introduction

The most recent data confirm the huge potential for increased adoption and use of ICTs and the Internet to boost growth through innovation in goods, services and enterprises, across all sectors. Differences among countries and between small and large enterprises remain considerable. Among the new uses of ICTs by enterprises, cloud computing deserves special attention. (OECD, 2013a). According to Eurostat survey (2015) in 2014, 22 % of EU-28 enterprises already adopted cloud computing services in most countries. It can be recognized thatcloud computing adoption rate is higher among large enterprises. According to the same research (Eurostat, 2015), only in Switzerland and the Slovak Republic adoption rates are higher for smaller enterprises than large ones.

This information is important as SMEs represent a large share of the economy in OECD countries (Eurostat, 2015).

In 2014, SMEs represented 99.8 % of EU28 enterprises in the non-financial business sector and generated almost 67 % of total employment with 58 % of the sector's value added. (Muller, Caliandro, Peycheva, Gagliardi, Marzocchi, Ramlogan & Cox, 2016).

In Slovenia, according to the results of the Statistical Office of the Republic of Slovenia (2015), 22 % of enterprises have adopted cloud computing services. It can be recognized that implementation of e-mail cloud computing service still predominates and has been adopted by 13 % of enterprises; 11 % of enterprises adopted cloud computing services such as word and spreadsheet editors and services for storage of files (all kinds of files, storage of backup files); 8 % of enterprises have adopted the service for hosting the company's database (data, their description and functionalities to store, search, maintain data in the database, etc.) as a cloud computing service; 7 % of companies have adopted finance or accounting software applications as a cloud computing service; 5 % of enterprises purchase software for managing information about customers and computing power for running the company's own software as a cloud computing service; 4 % of enterprises have adopted other cloud computing services (Republic of Slovenia, Statistical Office, 2015).

This data shows non-investigated market opportunities for cloud computing providers. It can be perceived that cloud computing development streams are not yet fully defined. Cloud computing providers try to achieve competitive market advantages, enterprises tend to achieve maximum business value from adopted services.

To provide the most efficient and attractive business cloud computing services and capacities to customers, cloud computing providers need to re-evaluate and potentially redesign their current business models to hasten cloud computing adoption. Cloud computing providers need to position themselves in the market, recognize potential networks, partnerships and also adoption factors that need to be correspondingly taken into consideration when addressing potential users. It is important to understand what the customers need, require, prefer, refuse, and what their fears are.

Several researchers (Chebrolu, 2011; Tweel, 2011; Low, Chen & Wu 2011; Benlian, 2009; Watson, 2010; Wu, 2011) have been researching the impact of cloud computing adoption factors and research models based on different technology adoption theories, such as TAM, UTUAT, TTF, TOE and others. Some of already introduced research models identify also factors that could also be classified in the business model framework (Bogataj, 2012). However, by our evidence no comprehensive research model of business model factors exists, providing comprehensive overview their impact on cloud computing adoption.

Scientific problem is addressed and revealed by the following research questions: (1) Which of the investigated business model factor groups have the highest impact on cloud computing adoption? (2) Do the opinions about the importance of the investigated factors differentiate according to the size of the enterprise?

The aim of the research was thus to define the most important business model factor groups and individual factors impacting cloud computing adoption and to investigate differences in opinions about their impact on cloud computing adoption according to enterprise size.

In order to achieve research aims, the following *objectives* were pursued: (1) Definition of business model factor groups and factors, potentially impacting cloud computing adoption – introduction of research model, (2) Identification of business model factors´ impact on cloud computing adoption among enterprises in Slovenia, (3) Identification of the differences in opinion regarding the importance of defined business model factor groups and factors on cloud computing adoption according to enterprise size.

Methods: (1) For the purpose of literature review – publications in scientific and professional journals have been analysed in the following databases: Web of Science, Scopus, ProQuest Dissertations and Theses, EIFL Direct – EBSCOhost, etc. For the purpose of analysis we used the following search keywords: Cloud Computing, Cloud Computing AND Business model, Cloud Computing AND Adoption, Cloud Computing AND Business model factors, Business model AND Technology Adoption, Infrastructure as a service AND Adoption, Platform as a service AND Adoption, Software as a Service AND Adoption. Important sources also presented secondary sources e.g. websites with related content. (2) Statistical analysis methods: a) Reliability and validity of the structural model were tested with Cronbach alpha and the average variance (AVE), b) Bootstrapping method was used for the T-test, investigating statistical significance of the influences, c) Benforreni test was used for identification of differences in opinions regarding the importance of business model factors according to the enterprise size.

Business Model Definitions

Different authors (Timmers, 1998; Amit & Zott, 2001; Petrovic *et al.,* 2001; Afuah & Tucci, 2001; Hedman in Kalling, 2003; Rappa, 2005; Osterwalder & Pingeur, 2004; 2009) provide many definitions of business model concept. Gordijn J., Akkermans H. & van Vliet H. (2000) point out that business models describe what the business is about and explain "who provides services or products of value to whom, and what he expects in return".

Lambert and Davison (2012) provide an overview of scientific contributions in the field of business models for the period 1996–2010. Many of them contribute also to the definition of business model elements and concepts. The following should be exposed: Rappa (2005) defines business model concept as the method of doing business by which a company can generate revenue. Amit in Zott (2001) highlight the importance of transactions. According to their definition, business model describes value creation steps, aiming at finalizing different transactions. Furthermore, Osterwalder and Pigneur (2010, 14) define business model as follows: "a business model describes the rationale of how an organization creates, delivers and captures value".

Generic Business Model (Hedman & Kalling 2003) offers a view to explaining the relationship between information systems and strategic management. Authors propose a multidimensional business model concept that includes both static and dynamic aspects of the business and emphasizes causal relationships between the components.

The basis of Osterwalder´s and Pigneur´s business model canvas tool is its conceptualization with various design variables in different domains (Osterwalder *et al.* 2005; Osterwalder & Pigneur 2009). Authors (Osterwalder & Pigneur 2004, 2009) define business model as a presentation of: a) values offered by organization to one or more customer segments, b) organizational business framework and partner network aiming at producing, marketing, delivering created values and profit generation. Integrity of the concept is supported with the consideration of the following elements: a) Customer Relationship Management, b) Partner network, c) Revenue generation, d) Price mechanisms.

Valuable and comprehensive overview of business model concept definition also results from E-Factors project consortium (2003). The consortium structures business model concept consisting of the following groups of elements: a) Technical and technology, b) Organizational, c) Industrial d) Individual, e) Social.

The list of exposed business model concept definitions is not exhaustive. Nevertheless, it can present a comprehensive outline of business model elements and business model creation methods. Business models are not static. According to de Reuver (2007) business model definition differentiate based on product or service market maturity stage. Always changing environment and fast technological development require their continuous modification and re-innovation.

Cloud Computing Research Framework Conceptualization

The research framework, introduced in our research bases on Osterwalder's business model framework (Osterwalder *et al.* 2005, Osterwalder & Pingeur, 2004; 2009) and E-Factors Consortium (2003) business model classification. Both business model frameworks are holistic and easy-to-understand, and are often recognized and adopted by enterprises in Slovenia. Within our research, exposed business model frameworks were further developed with the factors resulting from literature review and field research – interviews with cloud computing end

users and cloud computing providers. Feedback information regarding business model factors' impact on cloud computing adoption was used for evaluation of the preliminary research model. Figure 1 (below) presents introduced cloud computing research framework consisting of four pillars: Provider´s Capability for Cloud Computing, Value Proposition, Customer Relationship Management, Revenue Model and Costs (Bogataj, Pucihar, 2012; 2013).

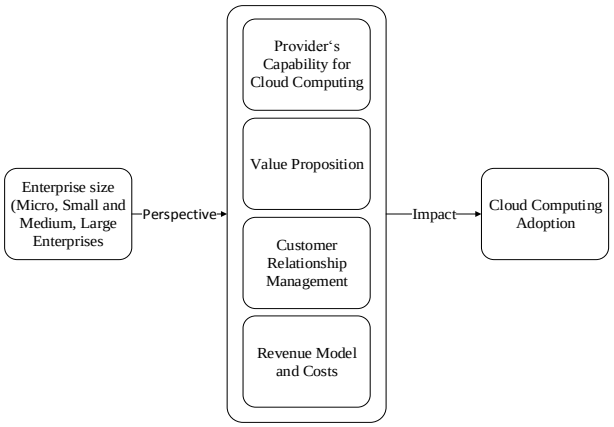

Figure 1. Cloud Computing Research Framework (Bogataj & Pucihar, 2013)

Provider´s Capability for Cloud Computing

This business model pillar represents the capability of the enterprise for the execution of activities needed for value creation. Organizational Capability can be presented from the perspective of Tangible (Technology, Machines, Equipment, etc.) and Intangible (Patents, Licenses, Trademarks, Copyright, etc.) Assets. Furthermore, this pillar also includes Know-How and Experience developed within the enterprise (Araujo, Dubois, & Gadde, 2003, Araujo & Novello, 2004, D'Adderio, 2001, Leek & Mason, 2010, Teece, 2007). Loasby (1998) also stresses the importance of the Organization's Indirect Capabilities; The Capabilities of Other Actors in the Established Network Business Partnerships are aiming at decreasing business risks and uncertainty and generating revenue. The following factors are presented as the key factors of a Business Partnership (i.e. Number of Partners, Partnership Agreements, Dispute Resolution Mechanisms, Co-Branding, the Level of Partners' Equality) (E-Factors consortium, 2003).

Provider´s Capability for Cloud Computing

For our research purposes, Provider´s Capability for Cloud Computing pillar consists of factor groups Collaboration with partners and Provider´s Tangible & Intangible Assets.

Factor group Collaboration with partners consists of individual business model factors: Co-branding – strategy for joint presentation of independent brands within one service (Erevelles, Stevenson & Srinivasan, 2008), Collaboration Among Partners – cooperation level of partners in the network, Partners´ Dispute Resolution Mechanisms, Partner Network Size – number of partners in the network.

Factor group Provider´s Tangible Assets consists of individual business model factors: Provider´s Financial Resources, Provider´s Technology and equipment (HW, SW…), Provider´s Reputation, Provider´s References and recommendation (Bogataj & Pucihar, 2012, 2013).

Value Proposition

Value Proposition pillar consists of factor groups Service Value For Customers and Orientation of Services to Target Customers. According to Osterwalder (2004), the Value Proposition is to be presented as the: a) Product or service value based on its feature (e.g. Value Added, Connectivity, Flexibility, etc.), complying with the customer's needs, and b) Product or service value definition from the perspective of effort reduction. Hinchley et al. (2011) define product or service Value Proposition as multidimensional, relative and differential, based on the customer group: a) Economic value of product or service, expressed in time and money, b) Psychological value of product or service, i.e. emotional benefits for the customer.

Teece (2010) stress the importance of correct answers to the following questions in the phase of value proposition definition: What is the product or service benefit for the customer? What can the product or service be used for? Are product or service upgrades already available to the customers? What do customers really value and how does the product or service meets their needs? Are there alternative products or services already available in the market and what are their competitive advantages or disadvantages? What are the current development industry status and further strategic development and business opportunities?

For the purpose of our research factor group Service Value For Customers consists of individual business model factors Service Economic Value, Usability, Flexibility, Trademark, Added Value, Connectivity, Customer Support. Factor group "Orientation of Service to Target Customers" consists of individual factors: Service orientation based on customers´ size, Service orientation based on customers´ activity area, Service orientation based on customers´ geographical area (Bogataj & Pucihar, 2012; 2013).

Customer Relationship Management

This pillar defines target customers (Osterwalder, 2004). It also involves strategies for customer data management (gathering, analysis, etc.), aiming at improving relationships with customers and adjusting to the customers' needs. It supports the definition of the right market strategies and customer segments in order to attract the attention, to meet customers' needs, and to maintain successful relationships is of the highest business importance and strategic challenge of the enterprise (E-Factors consortium, 2003). Created value proposition is mainly targeted for specific customer segment and business models structure, organizational value based on customers' segments and geographic areas. Marketing and customer loyalty and trust mechanisms follow the definition of the customer's˙ segments and geographic areas.

For our research purposes, Customer Relationship Management pillar consists of factor groups: Marketing and Trust Building Mechanisms. "Marketing" factor group further consists of the following individual business model factors: Direct marketing, Internet & Social Media, Partners´ Marketing Channels, and Publications. Trust Building Mechanisms factor group consists of the following

individual business model factors: User Authentication, System Security, Service Quality, Service and System Availability, Service Recovery Procedures (Bogataj & Pucihar, 2012, 2013).

Revenue Model

This business model pillar refers to the revenue model for value creation. Revenue generation logic is the organization's success barometer and its business results (Sainio & Marjakoski, 2009). It can include several pricing mechanisms. Furthermore, there is cost management, defining cost structure needed for value creation, customer relationship management, and infrastructure management. Some organizations implement more cost intensive business models, others less so. Cost intensive business models follow the goal of intensive cost reduction that can be achieved by the highest level of process automation. Organizations with less intensive cost models follow the goals of high added value creation and personalization (Osterwalder & Pigneur, 2009).

For the purpose of our research, business model pillar "Revenue model" consists of the following individual factors: Service Billing Per User, Service Billing Per Service, Service Billing Based on Market Price, Service Billing Based on Target Customers´ characteristics and abilities.

Research design and Results Analysis

Survey Design

The importance of the factors and their impact on cloud computing adoption was investigated via a survey conducted among enterprises in Slovenia. For the purpose of the survey, we designed the questionnaire, which based on the research model (Figure 1). The questions were grouped in 4 section: a) General data of the respondent (field of work, working experiences), b) General data about the enterprise (size, industry), c) Opinion about the importance of introduced business model factor groups and factors on cloud computing adoption, d) Previous experiences with cloud computing services.

Questionnaire testing was performed in collaboration with cloud computing providers (6) and cloud computing end users (4). 900 enterprises (300 randomly selected large enterprises, 300 medium-sized enterprises, and 300 small enterprises) were invited to participate in the survey (Bogataj & Pucihar, 2012). In total, 80 responses were valid for further statistical analysis.

Descriptive statistics – general data about the respondents

Table 1 presents respondents' field of work. 51 % in the survey participated respondents work in the field of Information Technology.

Table 1

Respondents´ Field of Work

Respondents´ field of work	*Frequency*	*%*
IT	*40*	*51*
Management	32	40
Other – programming, controlling, project management	8	9
Total	*80*	*100*

Half of the respondents (56 %, n = 45) had more than 10 years of working experiences (Table 2).

Table 2

Respondents' Working Experiences

Working experiences – years	*Frequency*	*%*
Up to 5 years	14	18
6 – 10 years	21	26
11 –15 years	13	16
16 – 20 years	11	14
More than 21 years	21	26
Total	*80*	*100*

Descriptive Statistics – General Data About the Enterprises

Most of the surveyed enterprises (77 %, n = 60) declared themselves as cloud computing service user. 23 % (n = 18) of in the survey participating enterprises declared themselves as cloud service providers.

42 % (n = 34) of in the survey participating enterprises can be categorized as medium-sized enterprises. 35 % (n = 28) of the sample represents small enterprises. Large enterprises present 23 % (n = 18) of the sample. Table 3 (below) presents proportion of responds according to the size of enterprise.

Table 3

Respondents According to Enterprise Size

Enterprise size	*Frequency*	*%*
Small	28	35
Medium sized	34	42
Large	18	23
Total	80	100

More than half in the survey participating enterprises are acting in service industry (n=32). In total 26 participating enterprises belong to processing industry (Table 4 below).

Table 4

Participating Enterprises According to their Main Activity Area

Industry	*Frequency*
Processing industry	
Processing industry – food and beverage production	8
Processing industry – production of electrical and optical equipment	6
Other processing industry activity areas (not defined)	12
Total – processing industry	*26*
Service Industry	
Computer programming, consultancy and related activities	10
Other service activity areas (not defined)	22
Total – service activity	*32*

Research Questions and Hypothesis

Based on the introduced research model, the aim of the research was to address the following research questions:

Q1: *Which of the investigated business model factor groups have the highest impact on cloud computing adoption?*

H01: *All investigated factor groups and individual factors have the same impact on cloud computing adoption*

$$H_0^1: \begin{cases} \text{Collaboration With Partners} \\ \text{Provider's Aassets} \\ \text{Service Value For Customers} \\ \text{Orientation Of Services To Target Customers} \\ \text{Marketing} \\ \text{Trust Building Mechanisms} \\ \text{Revenue Model} \\ \text{Costs} \end{cases} \rightarrow \text{Cloud Adoption}$$

Q2: *What are the differences in opinion about the importance of business model factor groups and factors on cloud computing adoption according to enterprise size?*

H02: *There are no significant differences in opinion about the importance of business model factor groups and individual factors on cloud computing adoption according to enterprise size.*

H_0^2: Small enterprises = Medium sized enterprises = Large enterprises

Reliability and validity of the model were tested with Cronbach alpha and the average variance (AVE). The model consists of nine combined variables. Table 5 (below) presents the AVE and Cronbach alpha values. Confirmation of the reliability and validity of the structural model allowed the continuation of the analysis.

Table 5

AVE in Cronbach Alfa Values

Business model pillar	*Business model factor group*	*AVE*	*Cronbach alfa*
	Y – Cloud Computing Adoption	0.726	0.811
Value Proposition	D1.1 – Service Value for Customers	0.729	0.982
	D1.2 – Service Orientation Towards Target Customers	0.896	0.989
Providers Capability For Cloud Computing	D2.1 – Collaboration With Partners	0.755	0.971
	D2.2 – Assets	0.758	0.978
Customer Relationship Management	D3.1 – Marketing	0.690	0.960
	D3.2 – Trust Building Mechanisms	0.750	0.980
Revenue Model & Costs	D4.1 – Revenue Model	0.754	0.971
	D4.2 – Costs	0.590	0.925

Q1: *Which of the investigated business model factor groups have the highest impact on cloud computing adoption?*

A bootstrapping method was used for the T-test, investigating statistical significance of the influences. T-statistics values are lower than 1.96 (significance level 0.05). Table 6 (below) presents the main result of PLS regression - slope coefficient values and statistical impact of investigated factor groups on cloud computing adoption. Directional correlation coefficients show the strength and direction of the connections between factor groups. The value of R2= 0.083 and represents the proportion of explained variance in the model, which in our case is considerably low.

Table 6

Slope Coefficient Values and Statistical Importance of Factor Groups on Cloud Computing Adoption

Business model pillar	*Business model factor group*	*Slope coefficient*	*t-statistics*
Value Proposition	D1.1 – Service Value For Customers	-0.423	0.478
	D1.2 – Service Orientation Towards Target Customers	-0.261	0.523
Providers' capability for cloud computing	D2.1 – Collaboration With Partners	0.555	1.181
	D2.2 – Assets	0.281	0.364
Customer Relationship Management	D3.1 – Marketing	-0.039	0.145
	D3.2 – Trust Building Mechanisms	-0.081	0.191
Revenue model & Costs	D4.1 – Revenue Model	0.181	0.373
	D4.2 – Costs	0.080	0.502
R2 = 0,083			

Based on the statistical analysis results, it can be concluded that there is no statistically significant impact of the analysed factor groups (Service Value for Customers, Service Orientation Towards Target Customers, Collaboration with Partners, Assets, Marketing, Trust Building Mechanisms, Revenue Model, Costs) on cloud computing adoption. **Based on the results, hypothesis H01 has been confirmed.** However, according to the values of slope coefficient and t-statistics business model factor group Collaboration With Partners can be recognized as having the highest (although not statistically significant at p=0.05) impact on cloud computing adoption.

Q2: *What are the differences in opinion about the importance of business model factor groups and factors to cloud computing adoption among the enterprises according to their size?*

The Benforreni test results show statistically significant differences (Table 7 below) in opinion among small, medium and large enterprises on the importance of the business model factor groups of Service Value for Customer and Assets to cloud computing adoption. Medium-sized and large enterprises state the business model factor groups of Service Value for Customer and Assets to be more important business model factor groups to cloud computing adoption in contrast to the opinion of small enterprises.

Table 7

Statistically Significant Differences in Opinion on Importance of Business Model Factor Groups According to the Size of Enterprise

Business model factor group	*F statistics*	*p – statistical significance*
D1.1– Service Value For Customers	4.744	0.005
D2.2 – Assets	4.834	0.004

Statistically significant differences in opinion among small, medium and large enterprises about the importance of individual business model factors in the factor groups Service Value for Customers and Assets are presented in Table 8 (below). It can be recognized that medium-sized and large companies find Service Connectivity, Financial Resources, References & Recommendations, and Knowledge & Experiences to be more important for cloud computing adoption in contrast to the opinion of small enterprises.

Table 8

Statistically Significant Differences in Opinion About the Importance of Investigated Factor Groups on Cloud Computing Adoption According to Enterprise Size

Business model factor group	*F*	*p*	*M1*	*M2*	*M3*
Service Value For Customers - Service Connectivity - impact SaaS adoption	9.244	0.00	2.27	4.09	4.35
Service Value For Customers - Service Connectivity - impact IaaS adoption	6.776	0.00	2.00	4.19	3.71
Assets - Financial Resources - impact to SaaS adoption	4.720	0.00	2.09	3.41	3.88
Assets - References & Recommendations - impact to SaaS adoption	6.288	0.00	2.82	4.24	4.53
Assets - Knowledge & Experiences - impact to SaaS adoption	6.593	0.00	2.73	4.57	4.35
Assets - Knowledge & Experiences - impact to IaaS adoption	4.933	0.00	2.33	4.37	4.00
Legend: M1 –Small enterprises, M2 – Medium sized enterprises, M3 – Large enterprises, p – statistical significance, F statistics					

Based on results, hypothesis **HO2 has been rejected** - statistically significant differences in opinion about the importance of investigated factor groups on cloud computing adoption among small enterprises, medium sized and large enterprises have been identified.

Discussion and Conclusions

The results represent a contribution to the theory of cloud computing adoption from the perspective of evaluation of the provider's business model. In particular, we were interested in what business model factor groups and individual factors have the greatest impact on cloud computing adoption and the differences in opinion regarding factors´ importance among small enterprises, medium sized and large enterprises. The research model was built upon prior research and adapted from Osterwalder's business model framework (Osterwalder *et al.* 2005, Osterwalder & Pingeur, 2004, 2009) and business model factors identified in the research project from the 5th Framework Programme, named E-Factors: A Thematic Network and E-Business Models (E-Factors Consortium, 2003) and other identified factors from literature and practice. The initial research model was evaluated and adapted based on interviews with five major cloud providers and five cloud computing users. Furthermore, a survey was conducted among 80 enterprises in Slovenia, which represented an 8.89 per cent response rate. Given that Slovenia only has two million inhabitants, the initial sample size was 900 randomly selected enterprises.

The research results revealed that there is no statistically significant impact of the following business model factor groups on cloud computing adoption: Value Proposition, Provider's Capability for Cloud Computing, Customer Relationship Management and Revenue Model, and Costs to cloud computing adoption. Nevertheless, based on slope coefficient directions and t statistics values, some factor groups can be recognized as having moderate or strong, positive impact on cloud computing adoption; although their impact cannot be statistically confirmed with 95% or 90% levels of confidence. Based on slope coefficient value (slope coefficient: 0.555), the Collaboration with Partners business model factor group can be recognized as having a moderate, positive impact on cloud adoption. This factor group consists of the business model factors Co-branding, Defined Collaboration with Partners, Dispute Resolution Mechanisms, Partner Network Size. These business model factors thus could be considered to have the major impact on cloud computing adoption of all the investigated factors.

Referring to the second research question, the results reveal statistically significant differences in opinions according to enterprise size. The results also show statistically significant differences in opinions among small, medium, and large enterprises about the importance of the factor groups Service Value for Customers and Assets. Medium-sized and large enterprises declare Service Connectivity, Financial Resources, References & Recommendations, and Knowledge & Experiences as more important for cloud computing adoption in comparison to the opinions of small enterprises.

The impact of Service Connectivity has already been investigated by Tweel (2012), Low *et al.* (2011), and Chebrolu (2011). Their research results show a statistically significant impact of Service Connectivity factor to cloud computing adoption. However, not all the mentioned authors have been investigating the impact on individual cloud computing service type.

Our research model presents a comprehensive consideration of the impact of business model factors on cloud computing adoption. Besides identifying business model factor groups and individual factors having the highest impact on cloud computing adoption, it also addresses the differences in opinion about the importance of business model factor groups on cloud computing adoption according to the size of enterprise.

It is understandable that cloud computing business models will be changing and evolving over time, adapting to market requirements, technological development, environment/social needs, and legislation. No great business model lasts forever. According to Jovarauskiene & Pilinkiene (2009) analysis results, the structure of business model depends on the company´s disposable resources, the structure of management and chosen strategy. Harmonization of these three factors has decisive influence on realization of the business model and its effectiveness in the market.

However, the results of this study show which factors of business models are considered to be more sensitive and important when companies consider cloud computing adoption. This can help providers to rethink, redesign, or re-market their current business models and tailor them according to the needs of different customers segments.

Findings of this study should also be interpreted in light of its limitations.

The analysis shows a low proportion of explained variance in the model (it can be argued that cloud computing adoption is impacted by many other factors. not included in our structural model). Due to this result, future research should further investigate individual business model factors or their grouping into new factor groups. The research should thus focus on the definition of research models with a higher proportion of explained variance.

The response rate in our study was 8.88 %. For further research an increase in the rate of participating enterprises is recommended. As the study has been done in Slovenia, research should be expanded to other geographical areas.

Further investigation is recommended to address also public institutions. as well as investigating potential models of cloud computing adoption.

With the aim of in-depth understanding of impacts of business model factors, deepening the investigation of each group of respondents (users/providers) is suggested. In this direction, it would be interesting to investigate and compare the characteristics of users and providers. Potential differences could also be investigated from the perspective of organizational structure, strategic alignment, the role of ICT, etc. For future research, the model should also include the impact of environmental factors, such as Competition, Business partners, Legislation, Economic Situation, in order to investigate their impact on cloud adoption.

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