KEY ELEMENTS OF STRATEGY IN THE TELECOMMUNICATION INDUSTRY – OVERVIEW OF DISCUSSION

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Abstract: The purpose of this article is to examine current empirical and theoretical approaches to the strategies of companies operating in the telecommunication industry and to identify important strategy elements for the telecommunication industry. These elements are systematically categorized into the overall strategic framework. Strategic elements not covered in current literature are identified as topics for future research. As the first conclusion, the article identifies the most frequent strategic element discussed in connection with the strategy in the telecommunication industry which is Market offering/Value proposition including its more detailed structure. Highly debated elements of Market offering are Price and Product and their features. On the other hand, only limited attention is paid to Resources and no attention at all is paid to Value chain in the selected articles. Thus, there is space for future research regarding strategy in telecommunications mainly in the areas of Value chain and Resources (both tangible and intangible). Even Market offering is highly debated, the strategic element Availability (sales and service channels) from the Market offering/Value proposition is covered only marginally and thus it should be a subject for future research.

Keywords: Competitive strategy, Value proposition, Telecommunication industry

JEL Classification: L24, M10, M31

INTRODUCTION

The purpose of this article is to review the current debate and identify structures and elements of strategies in the telecommunication industry. These structures should fit into a standard general strategic framework to offer a comparable basis for future research on the selected topic and thus help to better view the overall strategic context.

This article is organized as follows. First, there is a brief description of the selected strategy categorization and a brief description of the telecommunication industry along with an explanation of the selection criteria of the discussed articles. Second, there is a section dedicated to each article with the focus placed on identified elements of strategy. Finally, concluding remarks, limitations and proposals for future research are presented.

1. STRATEGY CLASSIFICATION

Because strategy is a very broad term and can have a range of meanings, we need to define a reasonably narrow scope of interest. Contemporary literature (Volberda et al., 2011) and (Wit & Meyer, 2014) differentiate two major levels of strategy – the corporate level and the business level.

The focus of this article is the business level strategy. Volberda et al. (2011, p. 166) defines it as follows: the business level strategy "is an integrated and coordinated set of commitments and actions the firm uses to gain a competitive advantage by exploiting core competencies in specific product markets." Any company utilizes its competitive advantage as a base for delivering profits through satisfying customer needs. The business level strategy should thus lead to establishing a competitive advantage.

The business level strategy sets a company business model. This business model comprises the following elements (Wit and Meyer 2014, p. 171 - 181):

- Resources: tangible (land, buildings, machines, raw materials, money) and intangible (competencies: knowledge, capabilities, attitude; relational: relationships and reputation)
- Value chain: primary activities (inbound logistics, manufacturing / processing/operations, outbound logistics, marketing and sales, services)and supporting activities (procurement, technology development, HR, general corporate infrastructure and administration
- Market offering (Product offering or Value proposition): industry, segment and the selected position (defined by price, products and their features, bundling, quality, availability, image and customer relations)

Market offering is a manifestation of the configuration of Resources and Value chain to a market. Strategy, regardless of its type, manifests itself in interaction with the customer in transactions in the market.
Thus, the strategy always expresses a certain complex market position across several dimensions, such as organization, capabilities or the chosen market segment and product.

2. TELECOMMUNICATION INDUSTRY – A BRIEF DESCRIPTION, CHARA-CTERISTICS AND DEVELOPMENT

The telecommunication industry has proven over the last thirty years to be a key factor in the development of national economies as an accelerator of the availability of technology, a replacement for travelling and by creating completely new types of virtual products and the related emergence of totally new sectors of the Internet economy.

The telecommunication industry has specific attributes linked to its network characteristics (Shy, 2010):

- Significant economy of scale in production
- Network externalities and externalities in consumption
- Complementarities, compatibility, standards
- Costs associated with changing of product/service provider for customer

Due to the strong economy of scale these markets often have an oligopolistic structure with just a few strong players or a structure with one dominant player with a group of smaller challengers.
This market is also often characterized by a high level of regulation. Market regulators oversee compliance with standards, compatibility and safety. Regulators also manage the use of scarce natural resources and are often involved in the relationship between service providers and customers.
Historically the telecommunication sector was considered to be a natural monopoly. This led in principle to granting the state a monopoly on operating telecommunication services (Smetana, 2013, s. 7). However, in the 1980s, the opinion prevailed that competition could contribute to the development of this sector and consequently to the increase of wealth in society (Shy 2010, p. 7). Thus the desire for a truly competitive strategy and differentiation in telecommunications was aroused.

3. SELECTION OF ARTICLES

This selection of articles is based on searches in the Scopus and Web of Science databases with the focus on the keywords “telecommunication(s)” and “strategy/strategic”. The review should take into account the actual discussion, so only articles from the actual decade from 2010 onwards are taken into account.
The Scopus database produced as the answer (all searches as of 14. 7. 2017) to this question in the Articles title, Abstract and Key words 11,282 items. Narrowing down this number by limiting the search to the Title we found 75 documents.

The Web of Science database produced as the answer to this question in Topic 1,109 items. Narrowing down this number by limiting the search to the Title we found 31 documents.

The articles have been sorted by the number of citations (from highest to lowest) and scanned by relevance to the topic of strategy and its structure and also on reasonable availability. Most of the not-relevant articles have a very narrow focus.

As to quotations, Ghezzi et al. (2015) has been quoted most often (16x at Scopus, 14x at Web of Science). The second most quoted article is by Jeng and Bailey (2012) - 16x at Scopus, 14x at Web of Science. The third most quoted is Wong (2010) - 16x at Scopus, 14x at Web of Science.

The articles cover various perspectives on the topic of strategy and its elements in the telecommunication industry. The purpose is to review those perspectives, categorize them in the overall strategic framework and identify the telecommunication industry specific elements of the described strategies.

4. CHANGING ROLE OF TELECOMMUNICATION INFRASTRUCTURE AND RISING COMPLEXITY

The basic approach to strategy in telecommunications often relies on the common strategic framework created by Porter (1998) considering a competitive advantage as a condition of staying ahead of competitors where the competitive advantage theory explains why some companies perform better than others (Ibid).

This starting point was chosen by Gould and Desjardin (2015). They built on Porter's approach (1998) to competitive advantage and they enhanced it with a generalization of their analysis of the Canadian Telecommunication sector.

Gould and Desjardins (2015) summarized the approach of Porter (1998) as a choice of a strategic manager to ideally select a free market position. The available space is defined on two axes. The first axis describes the scale of the target market (mass vs. niche) and the second axis defines advantages (differentiation vs. low-cost). Thus a manager has four available quadrants and four basic options: low cost leadership (mass market, low-cost), broad differentiation (mass market, differentiation), focused low-cost (niche market, low cost) and focused differentiation (niche market, differentiation). On top of these four basic options there is a fifth called "best-cost provider, incorporating elements of low-cost leadership and broad differentiation in such a way as to give customers the best price for a differentiated product" (Gould & Desjardins, 2015, s. 313).

"Competing entities should choose a strategy that has not already been taken by a rival"(Gould & Desjardins, 2015, s. 313) and thus a company can achieve a competitive advantage. This strategy is then executed within the Five forces framework (Porter, 1998).

Gould and Desjardins (2015) challenged Porter's strategic options framework (1998) as being relevant to the industrial age but not fully reflecting the changes brought about by the post-industrial era.

They demonstrated this by using the example of the telecommunication industry. Old infrastructure is used for completely new tasks and Market offering (originally voice transmission, now data transmission). Another example is the consumer electronics industry. Originally, consumer electronics products were capable of performing one function (e.g. radio). But as technologies developed in the digital era, many products and functions converged in one product – the mobile telephone is a symbol of this development.

Today mobile telephones or smartphones such as iPhones integrate many different services from various providers – voice and sms communication and data transmission from telecommunication services, music, books and movies from Apple and countless other services from third party applications.

But this development means a significant increase in the complexity of the offers provided by the telecommunication market from the point of view of customers. The complexity is related first to the number of services potentially provided and second to the necessary training or knowledge required to understand such services. The complexity is also multiplied by various combinations and price options for each service (Gould & Desjardins, 2015, p. 317).

Thus Gould and Desjardins (2015) proposed a new axis in Porter's original differentiating framework (1998). This new axis describes a complexity related advantage and establishes differentiation "based on enhanced customer service" (Gould & Desjardins, 2015, p. 318).

The complexity and related customer service definitely provides an opportunity for strategizing managers in the telecommunication industry. Thus Gould and Desjardin (2015) opened up a new dimension and space in Porter's (1988) positioning based approach allowing telecommunication companies to choose a strategic position not yet occupied by competitors. Gould and Desjardin (2015) categorically warned against fighting complexity with greater complexity in "complexity wars" particularly regarding bundling of services (Gould & Desjardins, 2015, s. 320) and they rather recommended a move to a strategy position based on simplicity.

The key message of Gould and Desjardin (2015) for this article lies indisputably in the identification of the important strategic element of complexity and related customer service. It adds another dimension to Porter's strategic option space. It is derived from a strong argument based on the concentration of services and products from various providers within a mobile phone as a consequence and a new phenomenon of the latest technological development.

The great importance of strategy in telecommunication lies also in the observation of the changing role of telecommunication infrastructure – from voice to data. A similarly important identified fact is the changing role of the mobile handset from a single purpose device (communication) to a platform for various services creating both opportunities and threats for telecommunication operators.

The question is whether complexity is a new dimension in Porter's (1988) strategic space or whether it is only another element of differentiation in the broader sense. Gould and Desjardins conceptualization could be called into question. On the other hand there cannot be any doubt that the topic is material and complements the picture of strategic choices described by Porter (1988).

5. CUSTOMER RELATIONSHIP, CONTENT INNOVATION AND INFRASTRUCTURE MANAGEMENT

Another approach to strategy in the telecommunication industry is represented by Ghezzi et al. (2015). They developed their own so called "emergent approach" (Ghezzi et al., 2015, s. 346) which they applied to the Italian mobile telecommunication market.

They challenged Porter (1988) from two directions. First, they see Porter's positioning approach as static. Ghezzi et al. (2015) view the market environment especially in technology industries as highly dynamic. This dynamism and fast changing conditions make strategic positioning unsuitable. The validity of the analysis of market positions and the analysis of Five forces (Porter, 1998) are valid only for short periods of time before they change.

Second, Ghezzi et al (2015) see that their "emergent approach to strategic technology management considers that a firm's competencies and resources are the main source of competitive advantage since they change at a much slower pace than technologies or market conditions."(Ghezzi et al., 2015, p. 347). This approach is considered as resource based (Ibid).

Ghezzi et al. (2015) see the telecommunication industry as heavily influenced by technological changes and development and thus suitable for the application of their emergent approach. "The emergent approach to strategy considers technology as a variable that induces change either externally, through uncontrolled innovation by competitors or players in other industries, or internally, through planned innovation." (Ibid 348).

Based on this, Ghezzi et al. (2015) have identified two disruptive change categories which shape and transform the telecommunication industry environment. These are an increase in data traffic and a decrease in voice revenues (Ibid 352).

The first category, Increase in data traffic, is reduced further into the Disruptive change factors: (1) Diffusion of Value Added Services (OTT, Over the top content – content of third parties in applications offered to mobile phone users, (2) Bandwidth consuming services (mainly applications delivering video content), (3) Accessible data plans (decreasing prices of high data volume tariffs), (4) Social networking services (always on the Internet), (5) Smartphones (multiproduct/services platforms), (6) Marketing effort (to sell more data services).

The second category, Decrease in voice revenues, is driven by these factors: (1) Market saturation, (2) Emergence of VoIP (Voice over IP applications like Viber, Skype etc.), (3) Social networking services.

The key message for this article is that telecommunication operators have to manage three strategic areas (Ghezzi et al. 2015, 352-253). The first area is customer relationships, the second is content innovation and commercialization and the third is infrastructure management.

The conclusions of Ghezzi et al. (2015) are brief but they bring a holistic approach to the strategy. If we link the first part of their article (competency as a source of competitive advantage) we can see strategic areas as areas of building potential capabilities and thus potential sources of a future competitive advantage of a telecommunication operator.

Ghezzi et al. (2015) did not investigate further the structure of those strategic areas which could provide potential space for further research. But their observations on the capabilities as sources of competitive advantage and their major categories in the fast changing environment cannot be overlooked.

6. CUSTOMER RETENTION

The key issue in any service industry is the loss of customers. This effect is called churn and significantly influences the profitability of telecommunication service providers. Wong (2010) indicated that in the Canadian telecommunication sector there was customer churn at the rate of 1.6% per month.

Thus, managing customer retention is a top strategic task of management in the telecommunication industry particularly due to the high acquisition cost of new customers (Wong, 2010, s. 2261). Wong (2010) focused on the Canadian telecommunication market to investigate how operators manage the churn of their customers with the focus on the influence of the appropriate rate (price) plan.

Various approaches to churn management strategies can be seen. Wong (2010) listed customer complaint management, customer satisfaction programmes and customer loyalty programmes among them. With the focus on retention he differentiated untargeted strategies (through increased brand loyalty) and targeted (through personalized incentives).

Wong (2010) also connected customer retention with customer satisfaction which is interconnected with service pricing, voice call quality, customer care, value-added services, handset offering, network coverage and product features.

Wong (2010) then specifically researched the influence of the fit of customer demand and selected rate plan. He found that in the Canadian telecommunication market 46.2% of customers were in a non-optimal rate plan (Wong, 2010, p. 2266). He also proved a connection between the churn and fit of customer demand and a rate plan used by customers.

Thus rate plan optimization (even leading to a decrease in the profitability of a particular customer) seems to be an appropriate retention strategy.

The key input for this article from Wong (2010) is the recognition of customer retention as an element of market strategy with a list of general elements influencing churn (service pricing, voice call quality, customer care, value-added services, handset offering, network coverage and product features). The special element added by Wong (2010) is the fit of customer demand and an adopted rate plan.

7. SPECIAL PRICING EFFECTS

Zucchini et al. (2013) focused on the specific telecommunication pricing element called "on-net discount". This means a discounted price for calling a party which is within the same network as the party making the call.

The discussion set by Zucchini et al. (2013) considered two options – to provide on-net discounts by a large operator or by a smaller telecommunication operator. There are arguments, according to Zucchini et al. (2013), to support both statements – by using on-net discounts larger operators can protect their customer base. This argument is based on the reasoning that a larger telecommunication network brings more discounted connections to the user and thus leads to the increase of benefits for customers on that particular network

The second reasoning is based on the idea that on-net discounting is more advantageous for smaller telecommunication operators because it damages the revenues of a larger operator more than that of a smaller operator.

Zucchini's (2010) research on the German telecommunication market more supports the first hypothesis.

This article of Zucchini's (2010) provides important input on the telecommunication market strategy. Identified elements of the market strategy are on-net discounts and termination rates (rates applied for a call originated in one network and terminated in another paid to the provider of the termination network).

8. BRANDING APPROACH

Brand positioning is one expression of company strategy on the business level. A strategic position in the market is thus reflected in the position of a brand. Alamro and Rowley (2011) researched in their case study the brand positioning of mobile telecommunication operators in the Jordanian telecommunication market.

We can derive from this study some basic strategic positions in the market. First, Alamro and Rowley (2011) underlined the importance of appropriate branding for services as such and for telecommunications particularly. Branding as a part of a Market offering strategy communicates to potential and current customers a brand promise or a position where the company wants to be and what customers should expect from it.

Then a brand experience materializes in the Market offering and in customer experience both with the product and related services. This part of the Market offering strategy is particularly important because it creates an incentive for repetitive buying of services and supports retention of customers. According to Alamro and Rowley (2011, s. 331) it "plays a special role in service companies because strong brands enable customers to better visualise and understand intangible services." Strategic positioning is then one of the inputs into the position of a brand.

They identify these basic strategic positions – Market leader, Mass market, International, High quality, Specialist, Cheap. In general it copies Porter's (1998) approach but it adds the attributes of Market leader and being International which can enhance the elements of a market strategy.

9. STRATEGIC BUNDLING

A case study of Chan-Olmsted and Guo (Chan-Olmsted & Guo, 2011) focused on bundling. The authors performed exploratory research of the US market during the years 2005 to 2009. They investigated an approach mainly to triple-play bundling of wire-line telecommunication and cable operators. Triple play bundling comprises a combination of wire-line voice service, Internet and video service. Quadruple play adds a mobile telecommunication service to this.

Chan et al. (2011) investigated the first motivation for bundling in the telecommunication industry. They distinguish two reasons – elimination of churn as well as improving retention of customers and increasing revenues by adding a complementary growth element to the core product.

"Such a strategy reduces transaction cost, increases marketing flexibility, boosts consumer loyalty, and delivers faster penetration" (Chan-Olmsted & Guo, 2011, s. 63) and leads to the "development of a converging telecommunications platform" (Ibid).

As to typology, Chan et al. (2011) identified two approaches to the bundling – price bundling and product bundling. Price bundling is characterized by a discounted price but by no integration of bundled products. Product bundling also adds to the discounted price an added value to customers. Bundled products can be, according to Chan et al. (2011), sold only within bundles (pure bundling) or either separately or in bundles (mixed bundling).

Chan et al. (2011) researched that product bundling is preferred by customers and that mixed bundling is prevalent in the telecommunication industry. The important property is the complementarity of the bundled products to the core product.

Telecommunication operators according to Chan et al. (2011) differentiate their approach to bundling from the position of their core product. Wire-line telecommunication operators complemented the first voice service by Internet and then by video and (IP)TV service. Cable operators complemented their TV service by Internet first and then also by voice (VoIP based) service.

The authors only marginally recognized the opportunity of bundling for mobile telecommunication operators but saw some future promise in the increasing capacity of mobile broadband services for competing with wire-line broadband and TV services.

The key takeaway from this article is the identification of bundling as a significant strategic element which opens up new markets for current telecommunication players. Strategic bundling however also leads to an increasing number of competitors in the telecommunication industry. Another important finding is the distinguishing of approaches to bundling depending on different core products (TV, wire-line, wireless service).

10. HOLISTIC APPROACH TO MARKET POSITIONING

A different approach to strategy in telecommunications is represented by an article of (Rajasekar & Al Raee, 2013). This article focused on the Oman telecommunication market and analyses it through Porter's (1998) Five Forces model.

The authors found some important strategic elements relevant for this article. The significant factor with the implication of the threat of an entry by a new competitor is according to Rajasekar and Al Raee (2013) the Customer switching costs. One example is special handset models (such as iPhone) sold by and locked to one operator, which adds another element to telecommunications strategy – (exclusive) offer of handsets.

Another derived strategic element mentioned by these authors is capital resources related to significant capital requirements for entering the telecommunication industry. Exclusive access to distribution channels is another strategic element influencing market entry. Having exclusive sales seems to be, according to Rajasekar and Al Raee (2013), an important competitive advantage.

The authors also mention price (and price discounting), marketing communication and overall service quality as important strategic elements influencing results in the market. Similarly they mention network coverage and financial strength as well as service features, support services and brand image as "significant factors of competiveness" (Rajasekar & Al Raee, 2013, s. 248).

The Oman market is characterized by a high degree of rivalry, price competition and similar products and with a high risk of substation products (voice over ip). On the other hand the authors do not see any great risk of the entry of new competitors and they consider the power of vendors as being low. They recommend that telecommunication operators should identify some differentiating strategy elements other than price but they are not clear which elements should be chosen.

One take-away fron this article is the quite extensive list of strategic elements both telecommunication specific (such as customers switching costs or the offer of handsets, financial strength related to capital requirements of industry) and generic (such as overall service quality and brand image).

11. STRUCTURED VALUE PROPOSITION

A different approach to the elements of market strategy are presented by Jeng and Bailey (2012). They analyse the Canadian mobile market and try to identify elements of the market proposition influencing customer satisfaction and retention of customers.

Jeng and Bailey (2012) found three major categories of the market proposition in the mobile telecommunication market. These are Costs (from the point of view of customers),

Product quality and Customer experience. Each major element comprises some sub-elements.
The element Costs is defined by Service price and by switching costs. Jeng and Bailey (2012, p. 1574) describe it as "the costs associated with entering and maintaining a relationship with a service provider". The element Product quality also has two sub-elements Phone service quality and Phone plan quality: "The quality of the physical product, the associated core services, and the quality of the contract fit" (Ibid). The importance of the price element signals that at least Canadian customers consider mobile telecommunication as a commodity product where the product quality is considered as very similar from each mobile operator. But from the mid-term point of view, prices should find their bottom derived from the industry cost structure
The element Customer experience is, according to Jeng and Bailey (2012), more complex and comprises 3 manageable elements: Complaint management, Customer service quality, Brand image. It can be described in other words as "The interactions between customers and firms in a larger context. The ability to deal with everyday service, exceptions, public responses, and the associated image that is generated" (Jeng & Bailey, 2012, s. 1574).
Thus, we have 7 elements of the strategic offer grouped in three categories. The analysis shows that the most important motivator of Canadian customers is cost where price "is thus a critical success factor in mobile telecoms" (Jeng & Bailey, 2012, s. 1589).
This study also found a decreasing importance of Phone service quality which Jeng and Bailey interpret as the shift of this element to a hygienic factor "and that value-added services are becoming of equal importance to core services."(Jeng & Bailey, 2012, s. 1589). This conclusion seems to be reasonable, but the authors did not include value-added services in their research at all. Jeng and Bailey (2012) also found that there is a "relationship between customer retention and plan complexity" (Ibid).
They recommend that mobile telecommunication operators focus on price with the increasing importance of customer experience and locking customers through loyalty programmes and long-term benefits.
Jeng and Bailey (2012) work with the comprehensive structure of the market value proposition of a mobile operator. Their conclusion from the Canadian telecommunication market on the importance of price and the increasing importance of customer experience shed light on where the focus of the telecommunication operator should be. The only inconsistency is the omission of value added services (including data services) in the model which is mentioned in the conclusions.
The key message of Jeng and Bailey (2012) for this article is a structured description of a Market offering/Value proposition split into three subcategories - costs (of customers), product quality and customer experience. These three categories are then broken down into more detailed subcategories.

SUMMARY

The discussion on the elements of strategy of telecommunication companies identifies a number of important topics.
We can structure identified elements as proposed by Wit and Meyer (2014) into three categories: Resources, Value chain and Market offering. Tab. 1 shows the occurrences of these standardized strategic categories and elements. This overview also shows where the focus of the authors is: mainly in the Market offering and partially in Resources. Value chain is not investigated in the selected articles.
Looking at the first category Resources, financial resources are mentioned once - by Rajasekar and Raee (2013). We can say that it is a rather generic strategic element which creates competitive advantage in any industry anyway but it deserves attention in the telecommunication industry due to the high requirements on investments in infrastructure.
The network as a tangible resource and as a strategic element is mentioned by Ghezzi et al. (2015) but is being kept only as a general item here - Infrastructure management. Wong (2010) and Rajasekar and Raee (2013) consider network coverage as an element of strategy. It makes sense because network coverage is a function of invested resources and increases

the business potential of any telecommunication network.
Only Alamro and Rowley (2011) identify the size of the customer base as a potential element of competitive advantage.

While the category Value chain is not at the focus of selected articles the most detailed structure can be seen in the third category of Market offering/Value proposition.

Tab. 1.: Overview of strategic elements in the selected articles in the structure defined by Wit and Meyer (2014)

Elements of strategy			**Gould and Desjardins (2015)**	**Ghezzi et al. (2015)**	**Wong (2010)**	**Zuchini et al. (2013)**	**Alamro and Rowley (2011)**	**Chan-Olmsted and Guo (2011)**	**Rajasekar and Raee (2013)**	**Jeng and Bailey (2012)**	**Frequency**
Resources											5
Tangible	Land										
	Buildings										
	Machines			X	X				X		3
	Raw materials										
	Money								X		1
	Customer base						X				1
Intangible	Competencies	Knowledge									
		Skills									
		Attitude									
	Relational resources	Relationships									
		Reputation									
Value chain											0
Primary activities	Inbound logistics										
	Manufacturing/processing/operations										
	Outbound logistics										
	Marketing&Sales										
	Service										
Support activities	Procurement										
	Technology development										
	HR										
	General firm infrustructure and administration										
Market offering/Value proposition											32
Industry											
Segment			X				X				2
Position	Price		X	X	X	X	X	X	X	X	8
	Products and their features			X	X		X	X	X	X	6
	Bundling		X					X			2
	Quality		X		X		X			X	4
	Availability								X		1
	Image				X		X		X	X	4
	Customer relations		X	X	X				X	X	5

Source: Own compilation, 2017

Gould and Desjardins (2015) approach is based on the traditional Porter's strategic market space (Porter 1988) of mass vs. niche and differentiation vs. low-cost approach. They also add a specific complexity dimension. Thus, a telecommunication operator can choose whether its Market offering would be either simplistic or complex.

Ghezzi (2015) identifies in this category two elements – Customer relationship and Content innovation.

Wong (2010) approaches strategy mainly from the retention point of view. He considers as the main elements of Market offering service pricing, voice call quality, customer care, value-added services, handset offering, and product features.

Zuchini et al. (2013) focused mainly on the price element, specifically on the on-net rate/discount (rate for calls into own network) and the termination rate (price paid by the other operator for outgoing calls to a network of the incoming call operator).

A brand based approach is represented by Alamro and Rowley (2011). They underline the importance of brand for service industries and identify various brand positions - Market leader, Mass market, International, High quality, Specialist and Cheap.

Aspects of bundling are investigated by Chan-Olmsted and Guo (2011). They see bundling of various telecommunication services as an opportunity for growth and churn reduction. This is valid both for the so called Triple play (wire-line voice service, Internet and video service) and Quadruple play (wire-line voice service, Internet, video service, mobile telecommunication services)

Rajasekar and Raee (2013) represent a holistic approach. They identify within their Porter (1988) based market analysis complex set of market offering elements - namely Customer switching costs, Price (and price discounting), Exclusive handset offer, Service support, Brand image, Exclusive sales channels and Overall service quality.

Jeng and Bailey (2012) are focused only on the area of Market offering and their approach is the most elaborated. They see three sub-categories – costs, product quality and customer experience. The sub-category Costs comprises two sub-elements – Service price and Switching costs, the subcategory Product quality of Phone service quality and Phone plan quality and the sub-category Customer experience of complaint management, Customer service quality and Brand image. But their strongest message to strategists despite the identified importance of price in the telecommunication Market offering is that price will find its bottom derived from costs and other differentiation elements such as value added services will be needed.

Tab. 2 illustrates an overview of strategic elements discussed in the selected articles allocated to the specific strategic categories. The bottom row eliminates duplicates and summarizes the strategic elements discussed in all articles as mentioned in the text above and it can be used for further research of the elements of strategy in the telecommunication industry.

LIMITATIONS AND AREAS FOR FUTURE RESEARCH

We can see that the areas of network, pricing, product quality, customer experience and differentiation are those most discussed by selected articles in relation to strategy in the telecommunication industry.

But the telecommunication industry is not limited in strategy only to those strategic elements of the current research focus. When we look at the three categories of strategic elements as defined by Wit and Meyer (2014) – Resources, Value chain and Market offering, the major focus of research is on Market offering.

On the other hand in the category of Resources, the major focus is on infrastructure and its parameters (network), partially also on financial resources and the size of the customer base.

The category of Value chain (manufacturing, logistics, marketing, sales and supporting functions such as HR and administration) is not mentioned.

The probable reason is that authors interested in the telecommunication industry try to identify either the most important strategic elements or the most industry specific or both. In any case this overview gives us guidance on the current focus of the debate.

Tab. 1 shows where future research should be first focused. Clearly, the area of intangible resources such as competencies or relations could be a source of competitive advantage. The telecommunication industry is a technology sector – meaning that it is highly demanding regarding knowledge and skills.

The area of Value chain definitely deserves attention – the telecommunication industry has significant operations running a nationwide network. These processes and activities significantly influence both the efficiency of the business and the provision of customer experience. The same is valid for logistics, marketing, sales and the service area of the Value chain.

The area of Market offering is well covered by the current research except for the strategic element availability. The availability (e.g. sales channels and their reach) is a very strong differentiating factor and thus a suitable object of future research in the telecommunication strategy.

Tab 2: Specific strategic elements mentioned by selected articles

Author	Resources	Market offerring/Value proposition
Gould and Desjardins (2015)		Target Market (Mass/Niche), Offering advantage (differentiation/low cost), Complexity (High/Low), Customer service, Bundling
Ghezzi (2015)	Infrastructure management	Customer relationship, Content innovation, Internet access, Price of data plans
Wong (2010)	Network coverage	Service pricing, Voice call quality, Customer care, Value-added services, Handset offering, Product features
Zuchini et al. (2013)		On-net discount, Termination rate
Alamro and Rowley (2011)	Size of customer base	Brand position (Market leader, Mass market, International, High quality, Specialist, Cheap)
Chan-Olmsted and Guo (2011)		Triple play (wire-line voice service, Internet and video service), Quadruple play (wire-line voice service, Internet, video service, mobile telecommunication services)
Rajasekar and Raee (2013)	Capital resources Network coverage	Customer switching costs, Price (and price discounting), Exclusive handset offer, Service support, Brand image, Exclusive sales channels, Overall service quality
Jeng and Bailey (2012)		Costs for customers (Service price, Switching costs), Product quality (Phone service quality, Phone plan quality), Customer experience (Complaint management, Customer service quality, Brand image)
Summary	Capital resources Infrastructure management Network coverage	Industry (wire-line voice service, Internet, video service, mobile telecommunication services), Segment (Mass/Niche, differentiation/low-cost, high/low complexity), Price (Service price, Switching costs, Phone plan quality), Bundling (Triple/Quadruple Play), Product (Voice call quality, Value added services, Handset offer), Quality (Phone service, phone plan), Availability (Exclusive sales channels), Image (Brand), Customer relations (Complaint management, Customer service quality)

Source: Own compilation, 2017

The limitation of this literature research lays in the focus placed on the strategy topic. It seems highly probable that some particular strategic elements could be found in more specific articles. However, it shows the direction for further literature research.

It would be interesting to conduct research on the importance and influence of other strategic elements on competitive advantage in the telecommunication industry to eliminate doubts about some hidden strategic elements with a significant influence on competitive advantage in the telecommunication industry.

The fragmented approach to strategies in the telecommunication industry also provides an opportunity for a holistic research approach which could identify the importance of each element and its significance regarding the competitive advantage of companies in this industry.

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