THE COMPETITIVE POSITION OF HUNGARIAN HAULING COMPANIES IN THE ROAD FREIGHT TRANSPORTATION SECTOR

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Abstract

Since 2016 Hungarian road freight transportation companies experienced a decline in their competitive position in the international road freight market. According to their suspicions, it is due to the number and market share expansion of Polish, Lithuanian, Romanian and Bulgarian carrier companies. Our study aims to explore the reasons of Hungarian haulier companies losing market share in the different sectors of international road freight transportation, while recognising the competitive advantage of their competition to define possible explanations. Through a representative survey with 300 companies that were customers of such services, have gathered quantitative data on the customers' viewpoint concluded in September 2020. The topics of the questionnaire concerned directions and volumes of road freight transportation needs, decision-making criteria and satisfaction with their choice of hauling partners. The questionnaire was supplemented by five in-depth interviews, the respondents being representatives of major companies who tend to commission road freight transport services in high volumes. The interviews let us gain valuable qualitative insights, collect possible underlying explanations of some questionnaire results and outline several recommendations for the future for administrative bodies and freight transportation companies as well.

Key words: road freight transportation, competitive advantage, CEE logistics sector.

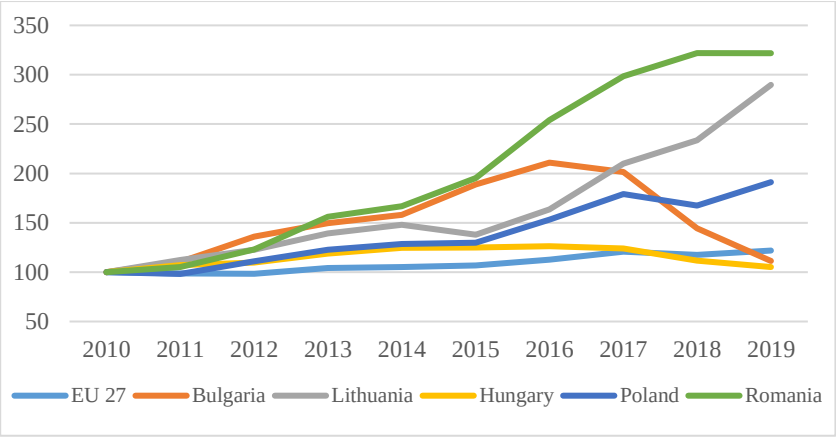
1. INTRODUCTION

The economic crisis of 2008-2010 was followed by steady growth in the Hungarian road freight transportation market. The companies started facing the first

setbacks on the international market in the mid 2010's. The ministry responsible for transportation was able to solve the problems with local interventions, however, the positive impacts dissolved in a couple of years. In 2018, the freight transportation advocacy organisations raised their concerns again about the declining competitiveness of Hungarian hauliers in the international market. To find the underlying reasons and the appropriate solutions the Hungarian Ministry for Innovation and Technology commenced a research project within the Institute for Transport Sciences Non-profit Ltd. (KTI).

The first phase of our research proved the existence of the indicated problem, with the analysis of statistical data. It was concluded that at the beginning of the studied period the Hungarian hauliers performed quite well on the market, their transport volume even exceeded the EU 27 increase rate up until 2015 (**Figure 1**).

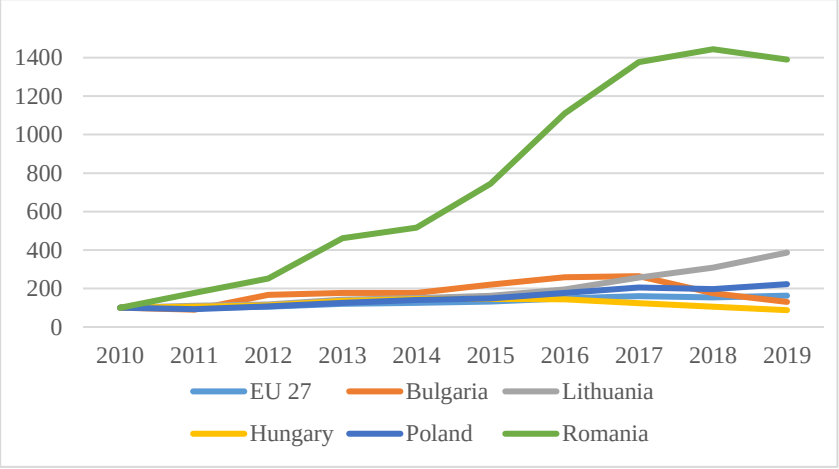
Figure 1. Development of loaded international road transport (million tonne-kilometre, %)



Source: (Eurostat, 2020a)

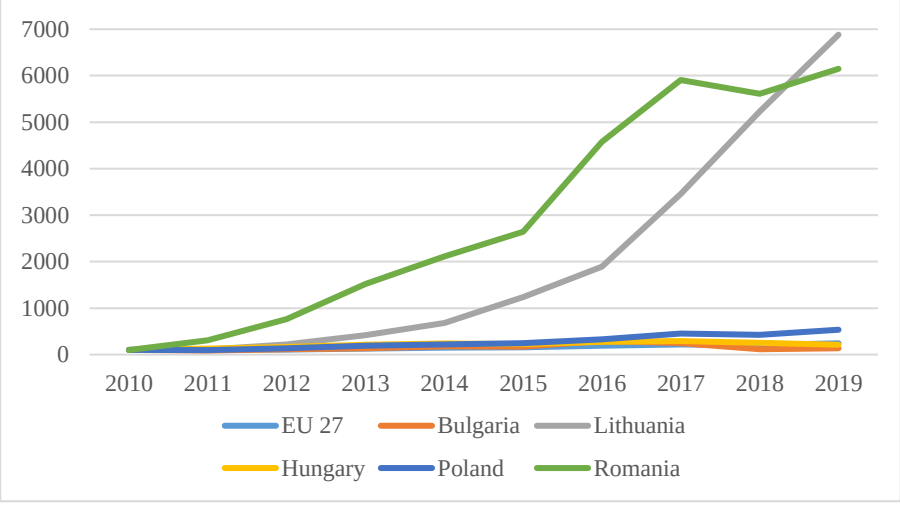
The total loaded international road transport in the EU27 countries slowly increased from 2010 to 2019 and within the performance of the Hungarian companies followed the increasing trend of the Central-Eastern European (CEE) countries until 2015. That year the performance of Hungarian hauliers diverged from CEE counterparts and showed a decline. Considering the different segments of international freight transportation it is clear, that the Hungarian hauliers suffered their most significant losses in the case of cross-trade (**Figure 2**) and cabotage (**Figure 3**).

Figure 2. Development of loaded cross-trade road transport 2010-2019 (million tonne-kilometre, %)



Source: (Eurostat, 2020b)

Figure 3. Development of loaded cabotage road transport 2010-2019 (million tonne-kilometre, %)



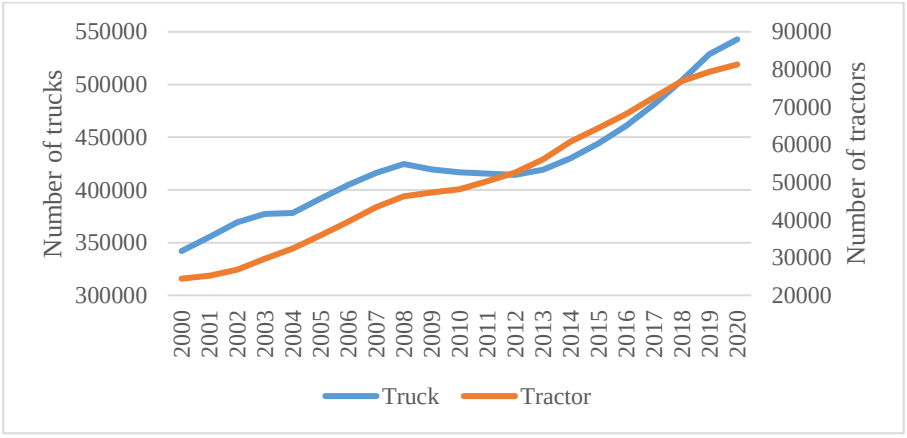
Source: (Eurostat, 2020b)

The most successful companiesin these operations were based in countries like Lithuania, Poland and Romania. Based on the first results of the investigation it is assumed the market decline of the Hungarian hauliers were prompted by a set of reasons: the emerging truck driver shortage, the increasing expenses on road tolls, the

lack of local market protection and the increasing ratio of enterprises managed by non-EU companies (Albert, 2021).

These less than ideal conditions were further aggravated by the different measures of the Mobility Packages introduced gradually by the European Union. Some of these measures affect quite adversely the Hungarian road hauliers (Albert & Kövesdi, 2021). The circumstances became more difficult, while the investment strategy of the transportation companies was based on the earlier business outlook and market trends: the vehicle fleet (including both trucks and tractors) was expanding with the same pace as in previous years, despite the shrinking market (**Figure 4**). Financing the new equipment while not using their capacity to the maximum obviously had budgetary consequences on the companies and placed them in a very difficult position.

Figure 4. Development of the truck and tractor fleet in Hungary



Source: Central Statistical Office (2020)

In order to investigate the above described loss of market in details and establish adequate recommendations for improving the position of Hungarian hauliers, five different research directions were defined:

1. Economic regulations: The competitive position is heavily influenced by the economic regulations, belonging to government competence. The study examined the possibilities of adjusting the relevant regulations, taking into account the interests of the transportation companies and their employees, the government budget, as well as the EU requirements.
2. Digitalisation: There is a rapid evolution in the field of digitalization. The current position of the Hungarian companies in transportation is less advanced than their competitors. Analysing and adopting the best practices in digitalisation of day-to-day transport operations seems essential and the

regulatory framework should support it and ultimately enhance their competitive advantage.

3. The special circumstances, local regulations, government measures in the field of road transportation of the competing countries were reviewed, and their impacts were estimated on international competitiveness.
4. The economic and environmental impacts of the different measures of EU Mobility Package I were estimated, and was proven to cause losses to the companies, the state budget, and with their horizontal effects to the entire society.
5. An important factor in market competitiveness is the customers' view on the local and foreign companies (transport operators) which is why it was an essential aim of the study to reveal the main factors of the clients' decision while choosing the carrier of their goods.

This article will present this last part of the research project, introducing the survey and interviews, the analysis of the findings, and the formulation of the recommendations. The research poses three research questions, which are the following:

What are the most important capabilities of hauliers considered by road freight transport customers?

Is there a causal relationship between the customers' selection preference that regards the competitiveness of road freight transport providers?

What are the improvement areas that would support the Hungarian road freight transport service providers' competitiveness?

2. LITERATURE REVIEW

The competitiveness of road freight transport companies in Hungary was studied by Pálfalvi-Tóth (1999) using survey method. The 600 respondents, which were all haulier companies, were asked about their perceptions and expectations on their future competitiveness after Hungary joined the EU (with the enlargement of 2004), in an international road freight market that is new to them. Freight rates were too low according to 65% of the respondents and 80% perceived a strong or very strong oversupply in the market. The authors noted the 15% difference occurred due to the hauliers' inability to recognise the low prices were a consequence of the oversupply of service providers. Less than half of the hauliers (46%) felt as they were competitive on the EU market, 40% responded negatively and 14% were unsure. The hauliers which considered themselves rather uncompetitive assumed the following factors held them back (in the order of claimed importance):

1. Technical condition of vehicles
2. Lack of liquidity or capital
3. Domestic business conditions

4. Domestic freight market regulation
5. Lack of freight market connections.

Although the survey was representative at the time, it did not consider the perspective of the customers of road transport services. Interestingly, the "old members" (EU15) of the EU perceived road freight market differently in the period after the "new members" (EU12) joined: Borgström & Gammelgaard (2017) presumed that in the liberalised hauling market the newly added members posed a threat to the EU15 freight transport companies. The authors assumed these companies would not be able to compete with Eastern European companies based on solely the pricing, as EU12 hauliers had a very different cost structure and for them especially the labour cost was considerably lower. Therefore, EU15 hauliers had to improve their value proposition to differentiate their services and create value to their customers via customised or special services. Their exploratory study assessed two hauliers (one in Denmark and one in the USA) through company visits with guided tours by management members, workshops and un-structured interviews. Having explored the two companies' both operational capabilities, resources and customer satisfaction aspects the authors concluded that "*strategy-as-practice*" is a beneficial view in a liberalised service providers' market (such as the EU, USA and China) and *dynamic capability-deployment* in line with customer expectations is supporting it. Most of all they found that other than price, the important factors in the eyes of the customers were: *quality, dependability, speed, flexibility and data technology/IT solutions*. Based on the comparative study, Borgström & Gammelgaard (2017) noted that a paradigm shift is happening in the road freight transportation that is triggered by the changes in market conditions and with the usage of new (digital) technology becoming normal, and hauliers not only facilitating the movement of goods but contributing to the value creation in supply chains.

Competitiveness in freight transport literature is mostly seen as a mode choice problem, therefore, competitiveness of road freight transport is understood in comparison to the other modes. The clients' preferences were studied in Li et al. (2020) for freight service attributes of China Railway Express. The researchers used questionnaires (n=63) to assess the importance of freight service attribute: *cost, time, reliability, frequency, safety, flexibility, traceability, sustainability*. Although, it regards railway, these attributes show similarities to those in road freight transportation services. Based on a stated preference survey, Arencibia et al. (2015) developed a freight mode choice modelling method and used *cost, transit time, frequency, punctuality, damages, flexibility, track&trace, environmental impact and schedules* as input attributes. Their model would define the WTP (willingness to pay) figures (what a user would pay for improving the level of service) and also, the elasticities of the mode choice probabilities. Brooks et al. (2012) studied mode choice between land-based transport and coastal shipping, and evaluates WTP for several attributes of modal options, such as *transit time, reliability, freight rate and frequency* via Stated Choice Experiment (SCE). In Kofteci et al. (2010), the consumer' (a survey

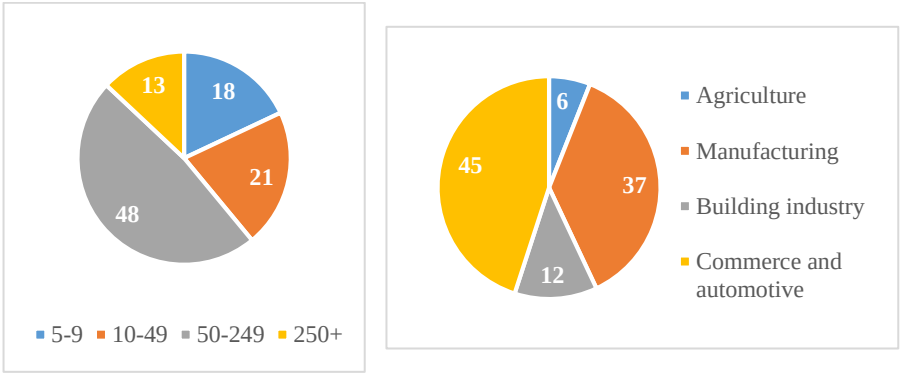
of 50 cement merchants in Antalaya) preference analysis showed that in their decision on using road freight transport or intermodal transport the time reliability is the determining variant, even more important than cost and time.

In the reviewed literature we could not identify a research segment where the competitiveness of the road freight transport service quality would have been studied from the customers' perspective.

3. METHODS

Our goal was to explore the view of customers of transportation services on their needs, preferences and satisfaction with services of the road freight transport companies. We aimed to explore the success factors of hauliers in the Hungarian road freight transportation sector and the areas where there is room for improvement. To accomplish this, a survey was performed with questionnaires on a sample of 300 Hungary based companies. The criteria for these companies to be included as respondents in the survey was to employ at least five people and send or receive goods internationally. All the respondent companies operated in the more freight transportation dependent sectors: agriculture, manufacturing, building industry, commerce and automotive industry. In **Figure 5** the distribution of company size by number of employees (left) and distribution of sample companies across industries (right) is presented.

Figure 5. Distribution of company size by number of employees (left) and distribution of sample companies across industries (right)



Source: Bank (2020)

Due to the high number of participating companies the survey can be considered representative, as well as 1.5% of road freight transportation volume of the country was performed by the sample companies and altogether 3.2% of freight transportation volume was related to their operations in 2019. The conclusions drawn from the survey are apt to describe the general view of freight transportation service customers.

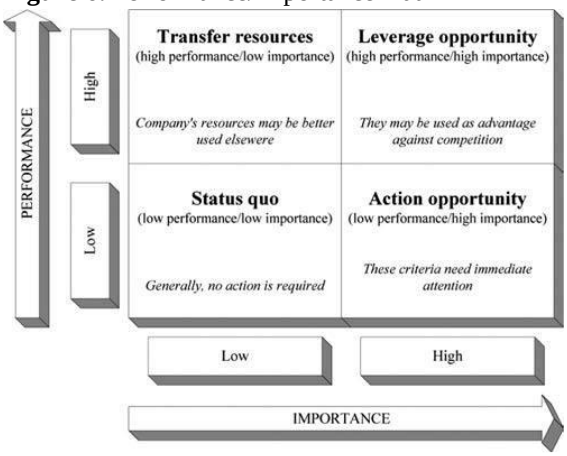
The survey was done via telephone/mobile/online communication software in 2020 during the summer following a structured questionnaire.

The questionnaire contains three major blocks:

- *Company data:* name, role of the representative within the organisation, industry in which the company operates, sales revenue in 2019, average number of employees, share of foreign ownership in the company.
- *Freight transportation parameters:* general needs for transportation and company preferences, such as transport mode, contractual or spot arrangements for cargo, usage of intermodal transport, hauling partners and freight forwarders, choosing non-Hungarian hauling companies.
- *International transportation preferences:* countries of import and export activities, characteristics of chosen haulier, satisfaction with their services, reasons of choosing foreign carrier partner.

Following the third section of the questionnaire the performance of the hauliers and the customers' satisfaction with them was weighed and organised into a performance/importance matrix that is suggested in the management literature (Grant, 2018; Politis et al., 2014). This method reveals the leverage and action opportunities, resources (capabilities) to transfer and the areas where no action is required (status quo).

Figure 6. Performance/importance matrix



Source: Politis (2014)

The questionnaire was supplemented by five in-depth interviews, the respondents being representatives of major companies who tend to commission road freight transportation services in high volumes. The majority of the interviewees represented companies that closed 2019 with a sales revenue over 5 billion HUF (over 14.2 million EUR by the current exchange rate), or belonged to a freight forwarding

company (major player in the Hungarian transportation sector). Engaging freight forwarders in such a research is highly beneficial for the deeper explanation of the results, since they are in direct contact with foreign transport companies too, their insights are extended throughout the international market. The aim of the interviews were to identify possible underlying explanations of some questionnaire results and attempt to outline several recommendations for road freight transportation companies in order to improve their performance and propose areas where authorities may offer support to the sector.
The questionnaires and the interviews were performed by a sub-contractor, GKI Innova Ltd., based on the specified requirements and the questionnaire/interview structure designed by KTI.

4. RESULTS AND DISCUSSION

Before presenting the results of the study an important aspect shall be noted: the results cannot in its entirety be applied to hauling operations such as cross-trade and cabotage as the respondents were customers of only import and export services, therefore their expressed opinion is referring solely to these activities.

Our respondents claimed that in 2019 they had used road as the main transportation mode for their cargo, up to 93% of their freight volume. The share of water and rail transportation was 1-1%, air and sea freight 5% altogether. The other modes were used as a section of multimodal transport, typically, using cranable semitrailers. The low share of multimodal transport was attributed to its lack of reliability, sometimes the cargo arrives 1-2 days later, which is not well tolerated by the recipients, time is especially crucial in the automotive industry – as one of our interviewees explained. Compared to the national average of 57 % road transport in 2019 (Central Statistical office, 2020), our respondents used road transport services in a much higher rate, therefore we concluded that our targeted group of respondents was the right one. The destination or origin of 78% of road freight transportation activities were in the EU. The share of export was 53% against 47% import, which is quite a balanced ratio. Not surprisingly export was the prevalent direction in agricultural and manufacturing industry, while the building industry was relying heavily on import.

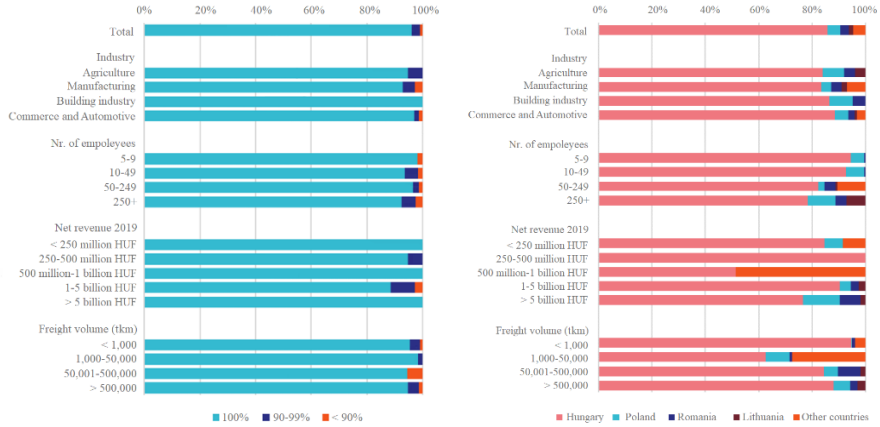
Only 40% of the respondents claimed they outsourced their transportation activities by contracting a freight forwarding partner. It was the least prevalent in the agricultural industry and mostly characterised the companies in the building industry (there may be some kind of correlation between the direction of transportation activities and the use of a freight forwarder but our study was not aiming to explore it in more detail). In general, with the increase of transport volume it was more likely that the respondents used the services of a freight forwarder, except in the top category (over 500,000 tonne-kilometre/year), in which companies the freight forwarding capabilities are most probably well-established in-house. The reasons for contracting

a freight forwarding partner were (in order of expressed importance): organisation of transports is simpler, needs less resources to manage, cheaper, faster and more reliable. The in-depth interviews clarified that even if the companies have contracted a freight forwarder, they do not use their services in every case and every direction. Sometimes they have a haulier partner that provides excellent service in a certain area but cannot take on an occasional route or time frame, therefore, they need a fast, reliable and flexible solution for these cases, hence the freight forwarding partner. Conversely, those respondents that did not have a freight forwarding partner indicated that it would be more expensive, more complicated for them, they rely mostly on their own transportation capacities (vehicles), or their transportation volume is lower than what would require the competencies of a freight forwarder.

The majority of their freight volume was transported on the basis of individual commissions and only one third of it was hauled based on recurring or yearly contracts. The interviewees explained these results with the difficulties of forecasting the transport volume in advance, and that sometimes they can negotiate better prices on the spot market than in case of a yearly or seasonal contract. In winter, especially in the beginning of the year (when the agricultural industry is low) transportation capacities are idle, the hauliers are forced the drop their prices, vice versa, high season comes with the risk of very high spot pricing or lack of sufficient capacities. The interviewees all worked with their hauliers based on yearly contracts, because for them reliability and predictability was more important than occasional discounts (note that the interviewees were representatives of major companies).

One of the cardinal questions during the study was the share of Hungarian and non-Hungarian hauliers performing road freight transportation activities commissioned by companies operating in Hungary. The answer is different if we look at the national and international market separately: as presented in **Figure 7** (left), the vast majority of the customers choose Hungarian hauliers, and only few of them uses occasionally non-Hungarian service providers. In **Figure 7** (right) we can see a slightly different picture being painted. The share of Hungarian hauliers is still very high (85%), but it is much lower than on the national market. In the questionnaire respondents had to specify the nationality of the haulier of their choice if not Hungarian: the most frequent answers were Polish (5%), Romanian (3%), Lithuanian (2%) and other (5%) companies.

Figure 7. Share of Hungarian and non-Hungarian hauliers performing road freight transportation activities at national (left) and international (right) market commissioned by companies operating in Hungary



Source: Bank (2020)

Compared to the previous year (2018) 7% of the respondents claimed they have switched Hungarian partners to non-Hungarian hauliers, and it was especially prevalent with the bigger companies, above 250 employees or over 5 billion HUF sales revenue. The stated reasons referred to most of all, pricing or lack of capacity. This is quite self-evident, as procurement departments of bigger companies work with a pool of service providers and their procedures are defined so that they take on the offers with the lowest price and the preferred availability.

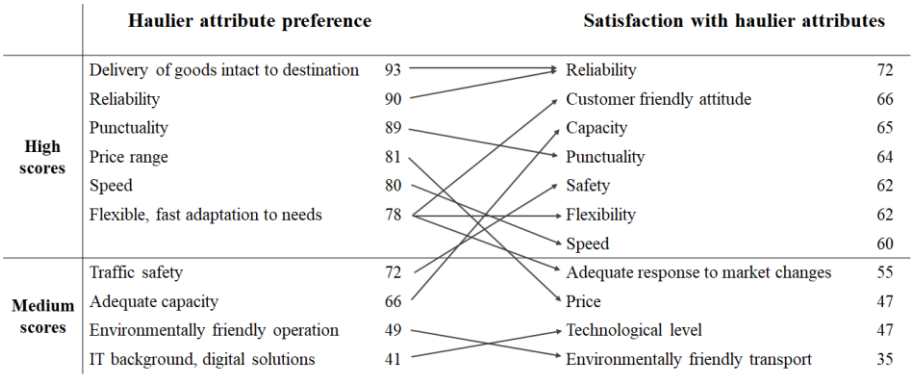
Our interviewees elaborated on the phenomenon, below we summarised their opinions:

- Road freight transportation directed to or coming from territories north of Hungary is usually the cheapest with Polish companies.
- They do not know of any Hungarian hauliers that cover the routes to the north.
- They have absolutely no interest in the nationality of the hauliers as long as they are reliable and the price range is acceptable.
- In case of the Commonwealth Independent States (CIS), companies are preferred with some linguistic background and local knowledge.
- In EU countries language and local knowledge is not an issue, price and quality aspects are crucial.
- Switching from a Hungarian haulier partner to a non-Hungarian one can be a result of market forces, sometimes customers make geographical shifts in their operations, therefore they need to adjust their transportation partners accordingly.
- The way the interviewees see it, all Central- and Eastern-European hauliers have a competitive advantage over Hungarian companies, as they employ (up to 60-

70%) Belarus and Ukrainian truck drivers for much lower wages, therefore they are able to quote lower freight transportation prices.

To explore the characteristics of chosen hauliers and satisfaction with their services, we asked the questionnaire respondents to evaluate on a Likert-type scale (form -100 to +100) the importance of multiple characteristics that may describe a preferred haulier and how their Hungarian partners perform in those domains. The attributes then were distributed in a matrix based on how important they are to customers and well the hauliers satisfy them, as we present it in Figure 8.

Figure 8. Importance of characteristics of preferred transportation partners and satisfaction with Hungarian hauliers



Source: own edition

When the preferences scored 75 or higher they were registered in the upper half of the matrix, and everything below that was regarded as "medium scores". In case of the satisfaction the respondents were quite opinionated, they had not regarded anything higher than 72, therefore we drew the line at 60, anything scoring below that signalled medium satisfaction. From top to bottom, the attributes in both columns are in order of the achieved scores and the arrows connect the preferred attributes to the judged performance. The most important criteria for customers were *delivery of goods intact to destination, reliability, punctuality, price range, speed, flexible, fast adaptation to needs* and they highly regarded the *reliability, customer friendly attitude, capacity, punctuality, safety, flexibility, speed* of their Hungarian haulier partners. It is clear that the performance in the highly valued reliability (delivery of goods intact to destination) meets the expectation of the clients, but the rest of the attributes cannot be paired up directly.

Appraising the potential for value creation – therefore, aiming for a competitive advantage – after the identification of the companies' capabilities and resources is supported by the identification of their strategic importance of said capabilities/resources and relative strengths in them compared to the competitors

(Grant, 2018). Based on this framework, the survey attributes had been weighted by the preference of customers and performance of the hauliers and a relevance-performance matrix was created. The matrix (in **Figure 9**) in its four segments can inform the hauliers whether their business model meets the expectations of their customers.

Figure 9. Haulier attribute preferences and their performance

	Hauliers perform well		**Hauliers perform less well**	
Important	Reliability (93*90*72)	*60.264*	Adequate response to market changes (78*55)	*42.9*
	Customer friendly attitude (78*66)	*51.48*	Price (81*47)	*38.07*
	Punctuality (89*64)	*56.96*		
	Flexibility (78*62)	*48.36*		
	Speed (80*60)	*48*		
Less important	Capacity (66*65)	*42.9*	Technological level (41*47)	*19.27*
	Traffic safety (72*62)	*44.64*	Environmentally friendly transport (49*35)	*17.15*

Source: own edition based on Grant (2018)

The upper left quarter shows the key strengths, the attributes where the companies perform well and their clients also expect them to do so. Practically, these are the attributes that provide competitive advantage to the Hungarian hauliers: *reliability, customer friendly attitude, punctuality, flexibility and speed.* In a sense these are the minimum requirements that shall be satisfied in order to keep operating profitably on the market.

In the top right corner there are attributes that still hold a very high value to clients, but their expectations are not quite met. Consequently, the *adequate response to market changes* and *price* are their key weaknesses, the areas where hauliers may benefit from improvements, which may even result in some market expansion. This segment of the matrix may be considered as a warning to hauliers, as the unsatisfied customer might discontinue their partnerships in the long run. Therefore, it is advisable to include these attributes in the strategic development plans of road freight transportation service providers.

The lower left corner contains the *capacity* and the *safety* aspects that was deemed less important by customers, however they also acknowledged that the Hungarian companies perform well in them. Even if they are not the most important attribute from the clients' point of view, for the operations and profitability they both are, avoiding sunk costs can be effective means to cost efficiency. The area is also called the superfluous strengths (Grant, 2018), and Politis et al. (2014) argues that a transfer of resources from here may be beneficial. This area is not a good place to start improvements, if only the customer satisfaction is the goal and there is no other internal operation problem or regulatory change that would justify the investment.

Lastly, in the bottom right corner are pooled the attributes (*technological level* and *environmentally friendly operation*) that have no particular importance to the customers and the Hungarian hauliers are not performing quite well in them (zone of irrelevance). In the general market atmosphere one could say the requirements are not so demanding right now. Apparently, changes in this area would not improve the competitive position of the hauliers, not even from a cost reduction point of view. Although, the logistics industry and the regulatory environment changes constantly, especially, in the areas of digital advancement and environmental protection. Sustainable logistics has not only penetrated the logistics industry but is also starting to be one of its the most relevant shaping forces (DHL Trend Research, 2020) that should be dealt with, sooner or later. The digitalisation process reached a high level in all industrial sectors and logistics is no exception, it is even said to become the norm soon (PwC, Transportation & Logistics CEE, 2019). With the EU Mobility Packages the regulatory environment is shifting more and more to the direction of enforcing both of the above aspects, not only to reach the target values of the Green Deal but to enhance international cooperation in transport.

5. CONCLUSION

So far, competitive advantage in the road freight transportation sector was an elusive notion, almost anecdotal, definitely a subject to guesswork. The scientific literature explored it mostly from the companies' point of view, not the clients'. If so, the customer perspective was investigated in the context of mode choice, not the choice of a specific haulier over the competitors. Advocacy organisations continuously expressed their concerns around CEE hauliers, emphasising that their market share (especially of the Polish, Latvian, Romanian and Bulgarian road freight transportation companies) is increasing in a worrisome proportion and pace. The complex topic of competitiveness in road freight transportation was studied from five different angles in the frame of KTI's research project commissioned by the Hungarian Ministry for Innovation and Technology. Having considered the multifaceted nature of the question, we also wanted to explore the customers' viewpoint on it.

Most of all we aimed to define customer expectations towards hauling partners (specific criteria) and to what extent they were met by the Hungarian hauliers. Furthermore, the viewpoint of a freight forwarder company was also included, as they would have much broader knowledge on the competition and on the current market situation.

On the contrary to what a bleak picture was painted by the hauliers about market loss and difficulties in maintaining their companies lucrative since 2015, our respondents would not confirm it. Looking back to previous years, most of the respondents claimed they prefer, and most likely partner Hungarian hauling

companies whenever it is possible, as they are mostly satisfied with their performance, they know them better and trust them more. They indicated only in 7% of the cases changing a Hungarian haulier to a foreign one and only when their usual partner did not have sufficient available capacity, or the mother company changed hauliers (mostly larger companies with centralised procurement office).

As we could not formulate an unambiguous explanation to the contradiction we are determined to continue the research and seek clarification to it.

The answer to the main question of the survey – how customers perceive road transportation services, what their needs and preferences are and to what degree it is satisfied – has been formulated. We aimed to explore the success factors of the hauliers in the Hungarian road freight transportation sector and the areas where there is room for improvement.

The most important criteria and the strengths of Hungarian hauliers are *reliability, customer friendly attitude, punctuality, flexibility and speed.* To maintain their competitiveness they need to keep their efficiency high in these areas and improve in them at least at the pace of the market changes.

We consider the outstanding performance within these attributes besides the technological excellence greatly dependent on the preparedness and commitment of the employees. Commercial vehicle drivers are the most obvious ones, nonetheless the dispatchers, clerks and customer service personnel add a tremendous amount to the good reputation of a company with their high quality and dedicated work. The clients are in contact with them the most often, practically they are the storefront of a transport service provider. An educated and reliable employee supports the competitiveness of the company, therefore, in our view the formation of adequate educational environment for these functions is of utmost importance.

It is advisable to pay more attention to the area which is deemed important by the clients but they are not fully satisfied with the performance of the Hungarian hauliers, which contains the *adequate response to market changes* and *price* aspects. Essential element is the price here, due to the very strong competition among CCE transport companies. The interviewees explained that it is only one component of the operational costs to hire less expensive drivers, a whole range of operational costs shall be considered for optimisation. In their opinion the competition uses their options provided by the regulatory framework better, the driving and rest periods of the drivers more efficiently and their routing is optimised. In this study we have not considered management techniques and operational aspects, however, interviewees claim that the high level of digitalisation and technological background of the competition definitely supports their competitiveness and profitability. We argue the role of the government in the provision of adequate incentives and regulatory infrastructure for development in these areas are both irrefutable and advisable.

Lastly, according to the view of the biggest customers of road transportation service providers, the EU Mobility Packages will negatively influence the cost efficiency of hauliers, the changes in driving and rest periods and travel allowance regulations will most probably weaken the competitive position of Hungarian road

transportation companies, especially in the Western European market. Reassuringly, Hungary is not the only nation that is dissatisfied with the contents of the Mobility Packages, a united stance was formed against the points that hinder environmentally friendly operations of road transport companies and the freedom of freight and service movements.

6. REFERENCES

Albert, G. (2021). The three sides of the coin: The special market position of the Hungarian road hauliers. *4th Travel through Science Conference. Sustainability and Resilience in Mobility, (paper accepted for publication)*.

Albert, G., & Kövesdi, I. (2021). Competetiveness vs. EU, thoughts on the economic impacts of the Mobility Packages. *In: Horváth, Balázs; Horváth, Gábor (Edit.) XI. International Conference on Transport Sciences: ' Transport after the Pandemic: Resume or Restart?'*, 536–549.

Arencibia, A. I., Feo-Valero, M., García-Menéndez, L., & Román, C. (2015). Modelling mode choice for freight transport using advanced choice experiments. *Transportation Research Part A: Policy and Practice*, *75*, 252–267. https://doi.org/10.1016/j.tra.2015.03.027

Bank, D. P. (2020). *Road freight transportation companies in the view of their clients*. GKI Innova Ltd.

Borgström, B., & Gammelgaard, B. (2017). Haulier Value Creation in Supply Chains: A strategy-as-practice Perspective. *Proceedings of the 29th Annual Nordic Logistics Research Network Conference. NOFOMA 2017*. https://research.cbs.dk/en/publications/haulier-value-creation-in-supply-chains-a-strategy-as-practice-pe

Brooks, M. R., Puckett, S. M., Hensher, D. A., & Sammons, A. (2012). Understanding mode choice decisions: A study of Australian freight shippers. *Maritime Economics & Logistics*, *14*(3), 274–299. https://doi.org/10.1057/mel.2012.8

Central Statistical office. (2020). *International freight by mode of transport*. https://www.ksh.hu/stadat_files/sza/hu/sza0052.html

Central Statistical Office. (2020). *Road vehicle stock on 31 December since 2000*. https://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_ode006c.html?down=2249

DHL Trend Research. (2020). *The logistics trend radar 5th Edition Delivering Insights Today, Creating Value Tomorrow*. DHL Customer Solutions & Innovation.

https://www.dhl.com/global-en/home/insights-and-innovation/insights/logistics-trend-radar.html

Eurostat. (2020a). *International annual road freight transport—Goods loaded in reporting country, by type of transport (Mio Tkm)*. https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do

Eurostat. (2020b). *Summary of annual road freight transport by type of operation and type of transport (1 000 t, Mio Tkm, Mio Veh-km)*. https://ec.europa.eu/eurostat/databrowser/view/ROAD_GO_TA_TOTT__custom_1077448/default/table?lang=en

Grant, R. M. (2018). *Contemporary strategy analysis* (10th ed.). Wiley & Sons, Inc. https://www.wiley.com/en-ge/Contemporary+Strategy+Analysis,+10th+Edition-p-9781119495673

Kofteci, S., Ergun, M., & Ay, H. S. (2010). Modeling freight transportation preferences: Conjoint analysis for Turkish Region. *Sci. Res. Essays*, 6.

Li, Q., Rezaei, J., Tavasszy, L., Wiegmans, B., Guo, J., Tang, Y., & Peng, Q. (2020). Customers' preferences for freight service attributes of China Railway Express. *Transportation Research Part A: Policy and Practice*, *142*, 225–236. https://doi.org/10.1016/j.tra.2020.10.019

Politis, Y., Giovanis, A., & Binioris, S. (2014). Logistics service quality and its effects on customer satisfaction in the manufacturing companies' supply chains: Empirical evidence from Greece. *Journal of Modelling in Management*, *9*(2), 215–237. https://doi.org/10.1108/JM2-05-2012-0016

PwC, Transportation & Logistics CEE. (2019). *Five Forces Transforming Transport & Logistics—PwC CEE Transport & Logistics Trend Book 2019*. https://www.pwc.com/hu/hu/kiadvanyok/assets/pdf/transport-logistics-trendbook-2019-en.pdf