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ARE WE READY FOR SMART CITIES?

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ABSTRACT

Smart cities are an emerging phenomenon, which is not only called for by their inhabitant's needs, but also by the more and more pressuring external factors, such as global economic slowdown, the increasing scarcity of resources and climate change. While smart cities are to increase the quality of life of the people, often the people themselves are not ready, not smart enough for them. Technology readiness is an important factor of technology adaptation; hence it is the basis of whether people are looking forward to smart cities or are rather afraid of them. In the current article, the readiness of people in an international sample is assessed with the help of a questionnaire, but the understanding of their choices is enriched by cultural and economic background data stemming from two representative international surveys, namely the Cultural Dimensions research of Geert Hofstede and the Global Entrepreneurship Monitor data. The results presented in the article are in line with the international literature but are enriching the existing body by combining the socioeconomic and cultural aspects in the interpretation of individual choices.

KEYWORDS

smart cities, readiness, perceptions, cultural embeddedness, socio-economic factors

CLASSIFICATION

JEL: E66, O14, O18, O33, O57

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INTRODUCTION

There is no universally accepted definition of a smart city, however, certain elements are usually inevitable when labelling a city smart. These are the use of novel info-communication technologies, sustainable solutions and an infrastructure that enables the improvement of the quality of life of its inhabitants in an efficient manner.

The phenomenon itself is multifaceted and has numerous notions that enable/belong to the core phenomenon: smart economy, smart environment, smart government, smart living conditions, smart mobility and last but not least smart people.

According to Kumar and Dahiya [1] smart economy is a result of the deliberate decision of people to switch from a conventional urban economy to a more diverse, more inclusive smart economy, where economic growth is achieved through the development of new technologies and effective means of production; where the sustainable development is nurtured by efficient management and participatory decision making to address the effects of global economic slowdown, the increasing scarcity of resources and the climate change.

A smart environment is an intelligent environment, which can acquire and apply knowledge about its inhabitants and their surroundings and adapt to the residents and their needs. Hence, the goals of a smart environment are the comfort of its inhabitants and the efficiency of the system catering to that. In line with this, the smart environment – through harnessing the benefits of multiple heterogeneous learning algorithms – can identify repeated patterns to control many aspects of the environment to match the activities of its inhabitants predicted based on their past behaviour. All in all, a smart environment is a label for a control strategy for a substantial and extremely complex environment [2].

Smart government is supposed to be the next step of e-government with improved use of technology and innovation for better performance. While municipalities may play a crucial role in smart cities' lives through funding initiatives for smart city development, it also includes the umbrella government and its inclination/tendency towards transforming into a more efficient, transparent, and publicly available service provider, which can be easily accessed by the citizens with the help of ICT [3]. On top of this, smart government is responsible for developing and providing sufficient infrastructure for high-quality services, efficient and future-oriented (increasing employability and technology readiness) training and education and fostering efficient information flow among all actors of the system to cope with the increasing complexity and uncertainty of the environment and to build resilience [4].

Smart living conditions are a synonym for a more comfortable and protective indoor environment for work and living, which is enabled through environmental control systems that not only monitor environmental conditions in real-time but also regulate the operation of household appliances [5]. Smart living conditions do not only affect the mood of their inhabitants, but through effective regulation, they have positive psychosomatic effects as well. The system is supportive not only through alleviating the burden on the human body caused by pressure to adjust to changes in temperature, humidity or fight allergies but also through positively influencing the root causes of such effects, diminishing the pollution, and in line with it the smog and the greenhouse effect.

Smart mobility enables a more efficient and coordinated travelling of people and the transfer of goods in a more coordinated traffic management system [6]. Intelligent vehicles can monitor and react to their environment while fostering the emergence of green mobility [7]. In line with this, smart mobility is not only about the vehicles, or the infrastructure necessary for private and public transport, but is also about the technology used to create and coordinate the vehicles and the resources that make the traffic sustainable [8, 9]. In the 21st century, smart mobility

could not be imagined without the (semi-)autonomous vehicles and their massive employment [10], in line with this, the research introduced in the article will also address this segment of smart cities separately.

Smart people are the cornerstones, but also the biggest weaknesses of smart cities. While educated people who are ready and eager to engage with the newest technology are the motors of the development of smart cities, it is easy to understand, how lack of technology readiness, distrust or technostress can adversely affect the development and implementation of smart technologies [11]. Even when it comes to the above-mentioned autonomous vehicles, the perceptions and attitudes of people are not unequivocal [12].

In line with the above introduced, a smart city is a settlement that develops its natural and artificial environment, digital infrastructure, as well as the quality and economic efficiency of the services available in its area, using modern and innovative information technologies, sustainably, with increased involvement of its residents. This last part of the definition is going to be the central notion of the research introduced in the current article, since without smart – ready and motivated – people smart cities cannot be established.

SOCIO-ECONOMIC FACTORS

Yigitcanlar and his co-authors [13] argue that smart cities shall address the existing economic, environmental, social and governance challenges since these are the factors that affect the readiness of the people for smart transformation. Noori, de Jong and Hoppe [14] have also highlighted the importance of socio-economic and political factors in addition to the actual level of technology when exploring smart city readiness. Technology readiness, according to Bui, Sankaran, and Sebastian [15] is influenced by eight socio-economic factors, namely: macroeconomy, competitiveness, ability to invest, cost of living and pricing, digital infrastructure, knowledgeable citizens, access to skilled workforce and culture. Chourabi and his co-authors [16] also recommend eight, but slightly different factors: economy, governance, policy context, built infrastructure, technology, management and organization, people and communities and natural environment.

In line with this, the socioeconomic embeddedness of individual decision-makers is deemed to be an important factor when it comes to readiness for smart cities or smart technology in general. However, it is not an easy task to collect and collate comparable international socio-economic data that can serve as a trustworthy starting point for further research. Hence, current research did not aim to collect data through primary research – which would surely have been insufficiently representative – but has tried to find publicly available databases, which can provide data to enrich de primarily collected data and support a more in-depth analysis of the topic under scrutiny.

The Global Entrepreneurship Monitor [17] carries out survey-based research on entrepreneurship for more than 20 years now, having started their research in 1999 as a joint project of Babson College (USA) and London Business School (UK). While entrepreneurship is not closely related to the topic under scrutiny, GEM is not only exploring entrepreneurial attitudes in multiple countries with primary data collected from various stakeholders-entrepreneurs, policymakers, experts – but also assesses the ecosystem enveloping (supporting or hindering) the entrepreneurial activities in the given countries. These environmental factors will be the ones used in our current research supporting the holistic understanding of readiness for smart cities in line with the embedded nature of the concept.

While for each country in the annual research – based on the data collected through the questionnaire – an economy profile is created, which is freely accessible through the GEM

webpage (https://www.gemconsortium.org/economy-profiles), the dataset for inquiries older than 3 years old is also available as SPSS files, enabling the further research of the variables by researchers. Such a dataset from 2016 is used for the current research article, since the novel samples from later years did not contain Hungarian data, and the dataset of 2021 – which had Hungarian data – is not openly available yet. While the dataset might seem outdated, in the case of the 2021 data the effects of COVID might have influenced the respondents in a way that makes the responses less comparable since the pandemics have hit different countries to different extents and have influenced the socioeconomic ecosystem differently.

As already indicated above, GEM does not only collect attitudinal indicators related to entrepreneurship but also explores the entrepreneurial framework conditions, to explore, how different countries provide various (un) favourable conditions for their business ventures. In line with this understanding, GEM explores a multitude of factors that might directly or indirectly influence business ventures:

- financing for entrepreneurs,
- governmental support and policies,
- taxes and bureaucracy,
- governmental programs,
- basic school entrepreneurial education and training,
- post-school entrepreneurial education and training,
- R&D transfer,
- commercial and professional infrastructure,
- internal market dynamics,
- internal market openness,
- physical and services infrastructure,
- cultural and social norms.

While most of them – at least indirectly – might also influence the technology readiness of individuals, in current research we concentrate on factors, that are indicated by international literature as being closely related to acceptance; namely: infrastructure, market opportunities, financing, governmental role, knowledge of people, availability of skilled workforce, R&D opportunities. The relevant statements describing these factors have been added to the dataset collected through primary research indicating the country averages for each respondent.

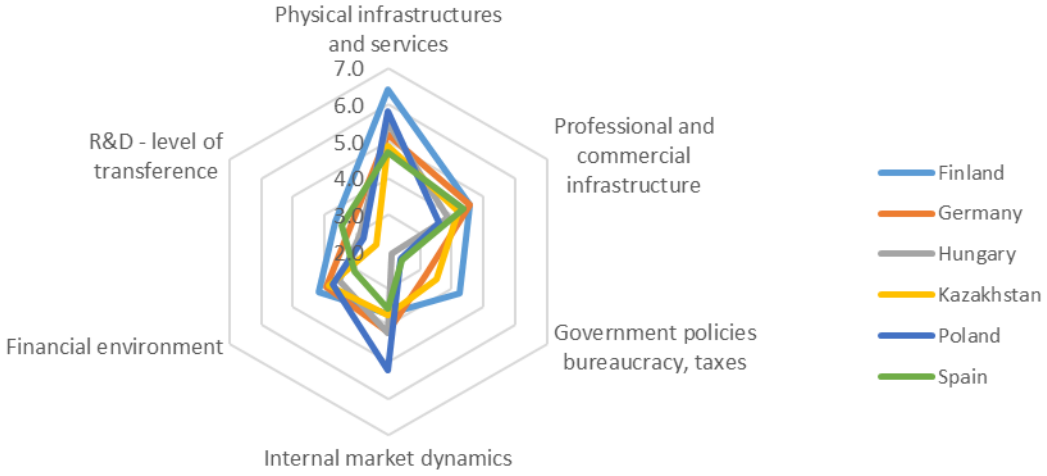

Figure 1. GEM indicators of countries in the sample [18].

As displayed in Figure 1, the differences among the explored countries cannot be regarded as extreme, however, it is visible that Finland – a country which is performing far better than the others in the sample is lagging in regards to internal market dynamics, or that Poland, which is an average performer in most of the factors explored has superior indicators when it comes to internal market dynamics and is only second to Finland in regards to physical infrastructures and services. The order of performance – be it by averages or by ranks within this list of countries – Finland has the best opportunities, followed by Germany and Poland. Based on the GEM data presented below, in regards, to the supportive environment, Hungary is only in the 5th place out of the 6 presented countries, only performing better than Sain, and slightly worse than Kazakhstan.

CULTURAL DIMENSIONS

The influence of cultural factors on new technology adoption has been recognised as a highly relevant field to be explored by many scientists [19, 20]. While it is commonly accepted that culture has an immense influence on human behaviour, there are only a few rigorous research exploring cultural factors over time, for a multitude of countries. Even though Staub, Keil and Brenner already in 1997 [21] highlighted that the Technology Acceptance Model (TAM) does not have sufficient predictive power when it comes to different cultures. Zakour [22] using Hofstede's [23] dimensions has already found data to support the cultural embeddedness of technology acceptance.

Luckily, Hofstede Insights, established by Geert Hofstede has not only been collecting data for over 30 years now, involving more and more countries in their sample, but they also provide their research results in a publicly available manner to support researchers in creating their models with the help of their cultural dimensions. While Hofstede has initially identified 4 different factors based on which national cultures might be compared:

- power distance,
- individualism,
- masculinity,
- uncertainty avoidance.

By now, the number of factors utilised has increased to six; Long-term orientation having been added by Hofstede later on and Indulgence having been recommended by Minkov [24], which also became an internal part of the six-factor model by now. The dimensions enable researchers to understand the hidden motives, norms and values behind individual decisions and behaviour, hence are of utmost importance from the point of view of our current research.

The first factor to be identified by Hofstede [25] was power distance which describes the degree of inequality between people that is still considered acceptable in a given culture. A low power distance shows relatively little inequality, where society does not accept or perceive functional human inequality in power, wealth, and prestige as inevitable [26]. Huang, Lu and Wok [27] have already highlighted the relevance of this cultural dimension incorporating it into the TAM model to understand the subjective perceptions of people in the People's Republic of China. According to Nikolov and Krumova [28] power distance even has a strong predictive power within the group of European countries when it comes to a very specific segment of smart cities, the e-Governance.

Individualism-collectivism as a spectrum indicates a cultural preference regarding being integrated into a group; whether the people in a given country prefer activities carried out individually, or those that are carried out as a member of a group. Individualistic societies prefer individuals, who can manage on their own, while in collectivist societies helping each other is important, hence the individual is supposed to show strong loyalty to the group and

community. Lee, and his co-workers [29] have found that individualism has a direct positive effect on technology acceptance. Tarhini and his team [30] have also highlighted that individualism has not only a positive effect on readiness but also a mediating effect when it comes to other cultural dimensions. According to Masimba, Appiah and Zuva [31] individualism has a positive correlation with technology adoption.

Masculinity as a cultural dimension can be well characterized by the behaviour associated with gender roles. Masculine traits, such as achievement, success, competition, endurance, and feminine traits, such as tenderness, solidarity, support, and human relationships, are features of the two ends of the continuum. What is more, in masculine societies, gender roles are more distinct than in feminine ones. According to Tarhini and his co-workers, [30] feminine cultures support the adoption of new technology more, through subjective norms and a more positive behavioural intention. In line with this Sun, Lee and Law [32] have also highlighted that masculine societies have a more negative attitude towards technology. Negara and Setyohadi [33] on the other hand emphasise that masculinity in itself might not be a good predictor of technology acceptance when it comes to smart city solutions. Contrary to this, Meyer-Warden and his colleagues [34] argue that femininity has a moderating value on uncertainty avoidance and hence has a positive effect on trust towards smart solutions that increase the subjective well-being of individuals.

Uncertainty avoidance is a cultural dimension that highlights the individuals' needs for structured, regulated situations. A too-high level of uncertainty avoidance usually indicates an anxious, aspiring society, while a society with a lower value is more flexible and easygoing. Based on research data presented by Venkatesh and Zhang [35] implementation of new technology is likely to cause a state of uncertainty, which in cultures with high uncertainty avoidance causes a higher level of perceived stress and discomfort. Negara and Setyohadi [33] have found that uncertainty avoidance is a good predictor of technology acceptance when it comes to smart city solutions. In line with this, according to Meyer-Warden and his colleagues [34] users from cultures with high uncertainty avoidance demonstrate higher levels of anxiety in cases of change, and implementation of new technologies, and have a high need for control.

Long-term orientation is a cultural dimension which has a holistic view of time, regarding not only the past and the present but also looking into the future. In line with this, in a culture characterised by a long-term orientation, the society's time orientation is determined by long-term thinking, judging a technology or a situation both by its present and future effects rather than just seeing the immediate short-term consequences. Long-term orientation is closely related to frugality and perseverance, building lasting relationships, and prioritising future rewards [36]. On this note, according to Tran Le Na and Hien [37] long-term orientation positively affects functional, social and emotional values of new technologies; hence is positively related to technology acceptance. However, while Negara [38] also proposes pragmatic societies with long-term orientation to adapt their traditions more easily to changing conditions, his research did not support the hypotheses.

Indulgence is a cultural dimension that indicates to what extent people tend to prioritise the enjoyment of life and seek immediate satisfaction and gratification. Indulgent societies tend not to control the individual urge to hedonism and do not control the desire to acquire a product or service. Low-indulgence societies on the other hand tend to be cynical and pessimistic, emphasising work above leisure time and controlling the gratification of desire. The actions in low-indulgence societies tend to be restricted by social norms, hence free will is of lesser importance. In countries with lower indulgence levels technology adoption is determined by levels of anxiety and uncertainty, while in indulgent cultures the basic motive behind adoption is the emotion attached to the good/service/situation. In line with this, they have found

indulgence to be rather a mediating variable than one that has an immediate effect on technology adoption. However, Escandon-Barbosa and her colleagues [39] have found a much more immediate relation between indulgence and the risk perception of individuals, with indulgence directly affecting purchasing behaviour related to new technologies.

Figure 2 shows the differences between the cultures represented in our survey based on the above-introduced cultural dimensions, highlighting that even though most of the cultures belong to the Western culture, there are still plenty of differences.

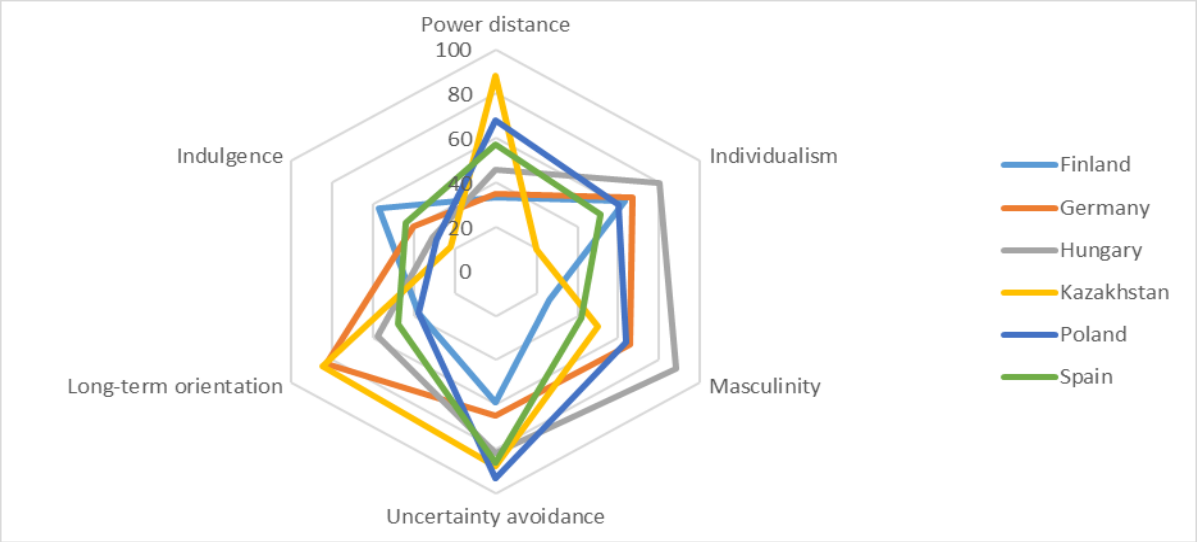

Figure 2. Evaluation of six different countries based on Hofstede's cultural dimensions.

As is visible from Figure 2, the power distance is the biggest in Kazakhstan, while Individualism is the lowest. On top of this, the Indulgence score is below average and Long - term orientation is far above the average of the displayed six countries. Among the European countries, Finland and Germany have the lowest Power distance, while Poland is by far the highest (but not even near Kazakhstan). In regards to Individualism, Hungary has the highest score and Spain the lowest, while other countries oscillate around 64. Hungary has the highest score also in Masculinity, and Finland has the lowest. The difference between these two extremes is 62, which on the 100 points scale – especially considering they both belong to the Western culture – shall be considered a radical contrast. The European cultures tend to be high on uncertainty avoidance, Poland leading the row with 93 points. Finland has the lowest uncertainty of all with a score of 59, which still shall be considered a preference for uncertainty avoidance. Germany is by far the most Long-term oriented culture, being followed, with a 15 points difference from Hungary. Other countries in the European sample were below 50, meaning that they tend to be rather short-term oriented. Regarding Indulgence, yet again Finland is the outlier, the only culture being above 50 on Indulgence. Other countries all have scores below 50, with Poland at the end of the row with 29.

RESEARCH GOALS AND METHOD

To understand, how socioeconomic and cultural factors influence the readiness of people for smart cities, primary research has been initiated among Generation Z people from these countries.

The research questions - in line with the already introduced international literature – were:

- Which factors have a significant influence on the readiness of people?
- How do these factors influence the perceptions of individuals towards smart technologies?
- What features will the fastest-adopting cultures have when it comes to smart cities?

While the socioeconomic and cultural factors were not explored within the frame of current research, on the one hand, because of potential lack of representativity, on the other hand, because the metrics introduced above have already been validated and used by many, hence the results that are based on them will be comparable.

Readiness and the underlying factors, such as motivation, fear and risk perception however have been explored through targeted primary research with the help of an online questionnaire. The sampling methodology was snowball since respondents to the questionnaire were collected through students studying at Óbuda University (Budapest, Hungary). The only criteria are age, ongoing or finished higher education, and a place of residence in a capital, city or at least a bigger town. With these metrics, the sample on hand could be focused on the age group that is soon to be the decision maker when it comes to purchasing decisions related to smart solutions, the other hand, while targeting those with (ongoing) higher education, the research intended to reach out to those, who will potentially have not only some basic knowledge related to smart solutions but also sufficient purchasing power to be able to afford them. The third criterium – place of residence – was important, since smart solutions can be employed individually but only if utilised in a greater mass and initiated by the local municipality can they foster the development of a smart city.

The questionnaire contained explorative questions where respondents had to rate their perceptions on a five-point Likert scale and some questions related to their demographic features, first and foremost to be able to validate their belonging to the targeted group.

RESEARCH SAMPLE

With the help of a Google questionnaire, 483 responses have been collected, but only 405 did meet the above-described criteria. As indicated in Figure 3 below, the majority of the respondents were from Hungary, even though the language of the questionnaire was English. However, the research has managed to reach out to at least 20 people from the selected countries, Figure 3.

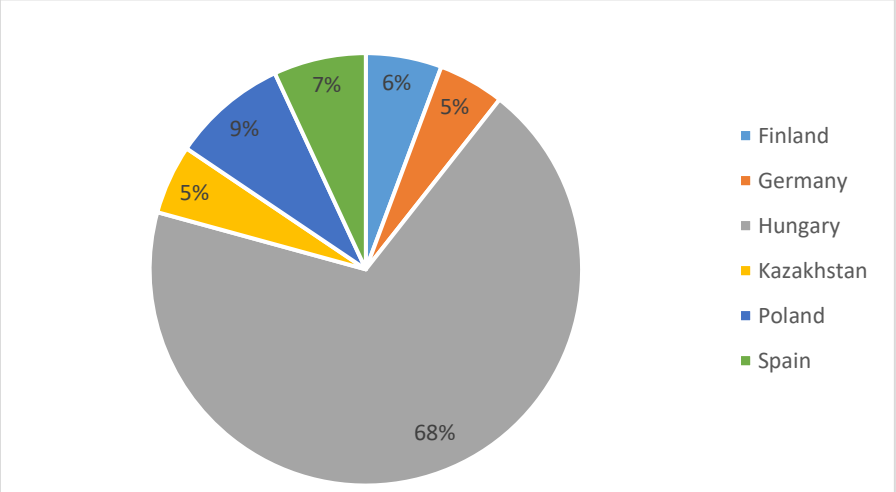

Figure 3. Distribution of respondents by country.

Altogether 55 % of the respondents were still in their bachelor studies, 21,5 in their master studies, and 13,1 have been pursuing postgraduate education at the time of the research. In line with this, the average age of respondents was 22,48 with a standard deviation of 2,579.

The sample contained 218 male, 182 female respondents and 5 indicated a preference not to identify with either gender. 58 % of the respondents were living in capital cities, 14 % in big cities and 28 in bigger towns, which is not only in line with the selection criteria but also enables us to test, whether smaller cities have the same opportunities as capital cities to become smart. The distribution of respondents by country and place of residency is introduced in Table 1.

Table 1. Distribution of respondents by countries and place of residency.

	capital	big city	town
Finland	4,0	5,0	14,0
Germany	8,0	0,0	12,0
Hungary	185,0	34,0	59,0
Kazakhstan	17,0	0,0	4,0
Poland	18,0	3,0	14,0
Spain	2,0	13,0	13,0

RESEARCH RESULTS

The respondents in the sample had very different attitudes towards smart solutions and new technologies. As indicated in Table 2, approximately half of the respondents perceive the benefits of smart technologies, only 84 % have stated to be afraid of new technologies, 54 % of the responses indicate that smart technologies are perceived to be too expensive and 37 % have issues regarding data security when it comes to smart solutions.

On the one hand, even though 57 % of the respondents have indicated a lack of fear of new technologies, there is still a significant part (25 %) of the young people (Generation Z) still do not perceive the potential benefits of emerging technologies, hence would not support the development of smart cities.

Table 2. Distribution of individual responses regarding factors affecting attitude towards smart solutions.

	Smart technologies positively affect emission	Smart technologies positively affect the society	Self-driving cars will reduce the occurrence of accidents	The security of personal data cannot be provided	Smart solutions are too expensive	I fear new technology
disagree	51	55	39	69	36	124
mostly do not agree	44	48	58	71	60	105
neither agree nor disagree	110	129	83	115	89	92
rather agree	116	108	141	86	118	48
completely agree	84	65	84	64	102	36

The male respondents in the sample had a slightly better perception of the new technologies (Smart technologies positively affect emission Correl.: 0,139; Sig, 0,005; Smart technologies positively affect the society Correl.: 0,148, Sig.:0,003; Self-driving cars will reduce the occurrence of accidents Correl.: 0,187; Sog.: 0,000) while people living in smaller towns had reported higher level of fear from new technology (Correl.: 0,123; Sig.:0,013). As it is visible, the correlations are modest and although significant, they cannot serve as the basis of further decisions.

The respondents had very different attitudes regarding automatization as well. As indicated by Figure 4, almost half of the respondents (40 %) preferred no, or very low level of automatization, and only 26 % full, or high-level automatization. Hence, the sample is rather balanced in this regard. Despite the young average age of respondents, not all of them indicated a preference for automated systems, and this ratio would be even less beneficial in the case of older generations.

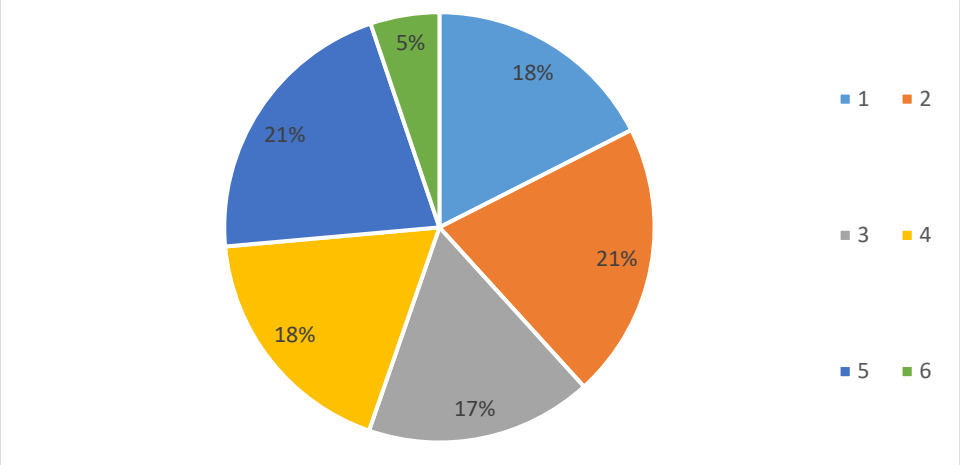

Figure 4. Distribution of respondents by preferred level of automatization.

Even though the international literature indicates plenty of connections between cultural dimensions and individual attitudes, in the sample only Individualism, Masculinity and Long-term orientation had significant correlations with perceptions related to smart technologies. As indicated in Table 3, the more individual a country was, the lower the preferred level of automatization was and the higher the perceived level of fear the respondents reported. The more feminine and/or long-term oriented a country was, the more its people were interested in the long-term effects of the smart technologies and have highlighted their agreement with its positive effects on emission. However, in the case of the preferred level of automatization, these two dimensions had adverse effects. While feminine cultures prefer a lower level of automatization in line with the traditional gender stereotypes, the more long-term oriented cultures prefer a higher-level automatization. Unfortunately, as indicated in Table 3, these correlations were also not strong enough to highlight real relations between the variables.

Table 3. Correlations of cultural dimensions with variables describing perceptions.

		Smart technologies positively affect emission	I fear new technology	Preferred level of automatization
Individualism	**Pearson Correl.**		0,126*	–0,164**
	Sig.		0,011	0,001
Masculinity	**Pearson Correl.**	–0,125*		–0,129**
	Sig.	0,012		0,009
Long Term Orientation	**Pearson Correl.**	0,165**		0,143**
	Sig.	0,001		0,004

*significant at the level $p < 0,05$
**significant at the level $p < 0,01$

Exploring the relations between socio-economic factors and perceptions related to smart solutions some factors, such as cybersecurity threats and perceived benefits were only related to a limited number of factors. While security was perceived to be an issue in countries where access to utilities was more problematic (Correl.: 0,105, Sig.: 0,035), the societal effect was evaluated as significantly higher for countries with higher levels of government support (Correl.: 0,107, Sig.: 0,032) and better access to basic infrastructures (Correl.: 0,111, Sig.: 0,026). In countries where the physical infrastructures were of good quality (Correl.:0,128, Sig.:0, 010), and those where the financial conditions were better (Correl.: 0,119, Sig.: 0,017) the perceived benefits of self-driving vehicles were also higher. The availability of professional and

commercial infrastructures (Correl.: 0,100, Sig.: 0,044), the access to physical infrastructures and services (Correl.: 0,133, Sig.: 0,007) along with government programs (Correl.: 0,126, Sig.: 0,011) positively affected the perception of smart technologies decreasing emission.

The two general factors describing the attitude of the respondents towards smart technologies had multiple correlations with socioeconomic factors, as indicated by Table 4. The preferred level of automatization was negatively affected by Internal market dynamics Physical infrastructures and services access. The more dynamic a market was, the less willing respondents seemed to accept high-level automatization. In the case of access to physical infrastructures and services, the negative relation is easily explainable through the lack of need for further improvement. Where the population is already satisfied with the advanced level of services, there is less need (drive) towards the application of novel technologies. Government programs, policies, professional and commercial infrastructures, education, and social norms were in positive relation with the preferred level of automatization, indicating that the more supportive the government is, the higher the level (of proficiency) of the education is, or the more supportive the societal values are, the higher the preferred level of automatization of the respondents were. These findings are in line with the results indicated by international literature, and even though the findings only indicate low levels of correlation, the tendencies are corroborating the findings of relevant international sources.

The fear of new technology was negatively related to higher-level education; the more information the respondents are provided the more aware they are of the potential benefits and the less risky they perceive new technologies. The more dynamic internal markets were or the more burdens they formed in the life of business ventures the more fear people indicated regarding new technologies. Interestingly, government policies were also positively related to

Table 4. Correlations of socioeconomic factors with variables describing the attitude of respondents.

		Preferred level of automatization	I fear new technology
Government concrete policies, priorities and support	Correl.		0,123*
	Sig.		0,013
Government policies bureaucracy, taxes	Correl.	0,153**	
	Sig.	0,002	
Government programs	Correl.	0,132**	
	Sig.	0,008	
Level of education (Primary and Secondary)	Correl.	0,141**	
	Sig.	0,005	
Level of education (Vocational, Professional, College and University)	Correl.	0,098*	–0,117*
	Sig.	0,049	0,018
Professional and commercial infrastructure access	Correl.	0,198**	
	Sig.	0,000	
Internal market dynamics	Correl.	–0,224**	0,115*
	Sig.	0,000	0,021
Internal market burdens	Correl.		0,106*
	Sig.		0,033
Physical infrastructures and services access	Correl.	-0,130**	
	Sig.	0,009	
Cultural, social norms and societal support	Correl.	0,177**	
	Sig.	0,000	

*significant at the level $p < 0,05$

**significant at the level $p < 0,01$

the perceived level of fear, which can only be explained through some other mediating variables. In countries, where the government provides concrete policies to guide the everyday life of its citizens, the people are much less open to change and much less prone to accept or employ new technologies.

Interestingly, neither the factor of financial environment nor, the R&D transference as important GED indicators had any significant correlation with perceptions related to smart technologies. This, however, might only be because of the limited size of the sample, since previously highlighted correlations were also weak, especially compared to those presented by relevant international literature.

CONCLUSIONS

While there is no consensus on the definition of smart cities it is indisputably an emerging phenomenon, which is not only called for by people who seek to find a better environment, but also by the more and more pressuring external factors, such as global economic slowdown, the increasing scarcity of resources and the climate change. There are multiple factors contributing to the smartness of a settlement, among them technological, infrastructural, environmental and governmental variables, but the necessity of smart people is beyond doubt.

While smart cities are supposed to increase the quality of life of their people, often the people themselves are not ready for them. Technology readiness is an important factor of technology adaptation; hence it is the basis of whether people are looking forward to smart cities or are rather afraid of them. According to multiple international literature introduced in the current article, technology readiness is multifaceted. It is not only individual variables, such as age, gender or educational level, that influence it, but also economic and cultural variables have a direct or a mediating effect regarding the perceptions of their potential risks and benefits.

In the current article, the readiness of people was assessed with the help of a questionnaire completed by 405 respondents from 6 different countries, and the understanding of their choices was enriched with the help of country-specific variables stemming from two representative international surveys, namely the Cultural Dimensions research of Geert Hofstede [18] and the Global Entrepreneurship Monitor data [17]. While the correlations between various variables were rather weak, the results were in line with the international literature, highlighting the importance of socioeconomic as well as cultural embeddedness of people, when it comes to readiness for smart cities, or simply for novel technology. The current article has managed to enrich the existing body of smart cities-related literature by combining the socioeconomic and cultural aspects in the interpretation of individual choices.

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