USER EXPERIENCE INFLUENCE ON RELIABILITY OF IT IN ORGANIZATION IN THE CONTEXT OF JOB CHARACTERISTICS

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Abstract

The paper concerns the notion of information technology (IT) reliability in an organization and User Experience as one of the factors which may potentially increase this reliability through a role of users (who should willingly use IT to perform tasks it is designed to support). Frequency of IT use (also in the context of economic advancement as a comparison between central Europe and North America) and job characteristics, such as task complexity, structuration and uniqueness are discussed as potential moderators strengthening that relation. The empirical research was performed among 550 organizations operating in Poland and USA in order to verify whether User Experience might be the factor positively influencing IT reliability in an organization and whether identified job characteristics indeed are strengthening that influence. The obtained results confirmed, among others, that the more complex and less routine are the tasks performed by the employee, the more significant is the influence of IT User Experience on IT reliability.

Keywords: user Experience, IT reliability, IT in organization, job characteristics
JEL Classification: M15, M54

Introduction

In the world of modern organizations, which competitive advantage comes from information technology (IT) solutions use, not its possession, the need for the analysis of IT use is apparent (Bieńkowska et al., 2017; Tworek, 2019). It is a well-established fact that not possession, but proper use and reliability of IT is positively influencing organizational performance through various mechanisms (Luftman, 2004; Tworek, 2019). From various research concerning the notion of IT reliability, it can be concluded that usability is especially important component of that notion which allows for the analysis of user's role in sustaining this reliability and sustaining the competitive advantage for the organization. Among various concepts concerning the users' perception of IT in the organization, User Experience might be one, which may influence IT reliability indicating the role of users. However, it seems that this influence has a different significance for the employee depending on the type of work, which the employee if performing. It may be assumed that in some cases (e.g. more complex tasks, stronger dependence on IT support), User

Experience should be able to boost IT reliability much more significantly than in others. Therefore, the main aim of this article will be to analyze the potential role of job characteristics influence on the strength of the relation between IT User Experience and reliability of IT used in the organization in the context of the frequency of IT use and economic advancement. Since empirical research concerning IT use in organizations is highly dependent on business context (more advanced economies are characterized by higher adoption and alignment of IT and may be a source of different conclusions that less advanced economies, where IT importance is still growing), the analysis will be based on two business contexts, allowing to base results on organizations operating in Central Europe (Poland) and North America (USA).

1 IT Reliability and IT User Experience

It is indisputable that the use of IT in organizations is gaining relevance and the need for its proper and comprehensive analysis and evaluation is apparent (Tworek, 2019). The concept defined by Little (2003) of reliability, resilience and robustness (3R) is the one, which emerged in the literature a few years ago. It indicates the key factors – 3R – as the concepts influencing the ability to generate profit for the organization from using IT (Tworek, 2019). In this article, the IT reliability complemented by IT User Experience will be used as a framework for the analysis of IT solutions in the organization.

1.1 IT reliability

The reliability of IT in an organization is defined as "a measurable property of IT, useful for its control and management, identifying its quality level and pointing out potential problems (Zahedi, 1987) and it is directly linked to the efficiency of IT components, especially those critical to its proper operations" (Tworek, 2019). There are three theories concerning the analysis of IT in an organization, which can be used to furthermore define IT reliability. The most important one is an IT success model developed by DeLone and McLean (DeLone, McLean, 2003) complemented with TAM model (Davis, 1985). Besides that, the IT failures model proposed by Lyytinen (1987) gives additional opportunity to explore the sources of the unreliability of IT. The model of IT reliability in the organization has been developed by Tworek (2016, 2019) and it was already verified in various business contexts (Tworek 2018a, 2018b, 2018c).

The full version of IT reliability model (which originally has 28 items describing four main elements of the model and is available, e.g. in Tworek, 2019) is presented in Figure 1. The reliability of IT in the organization consists of four components: reliability of the information included in IT in the organization, reliability of support services offered for IT in the organization and reliability of system itself, which also includes the reliability of usage of this system.

The IT reliability will be analyzed using a shortened version of the model based on: reliability of information included in IT in organization (mostly its accuracy, relevance and accessibility), reliability of support services offered for IT in the organization (mostly their availability and responsiveness) and reliability of system itself (mostly availability, stability and security, but above all also including the usage reliability – its usability understood mostly as efficiency, acceptance and ease of use). The usage reliability as an element

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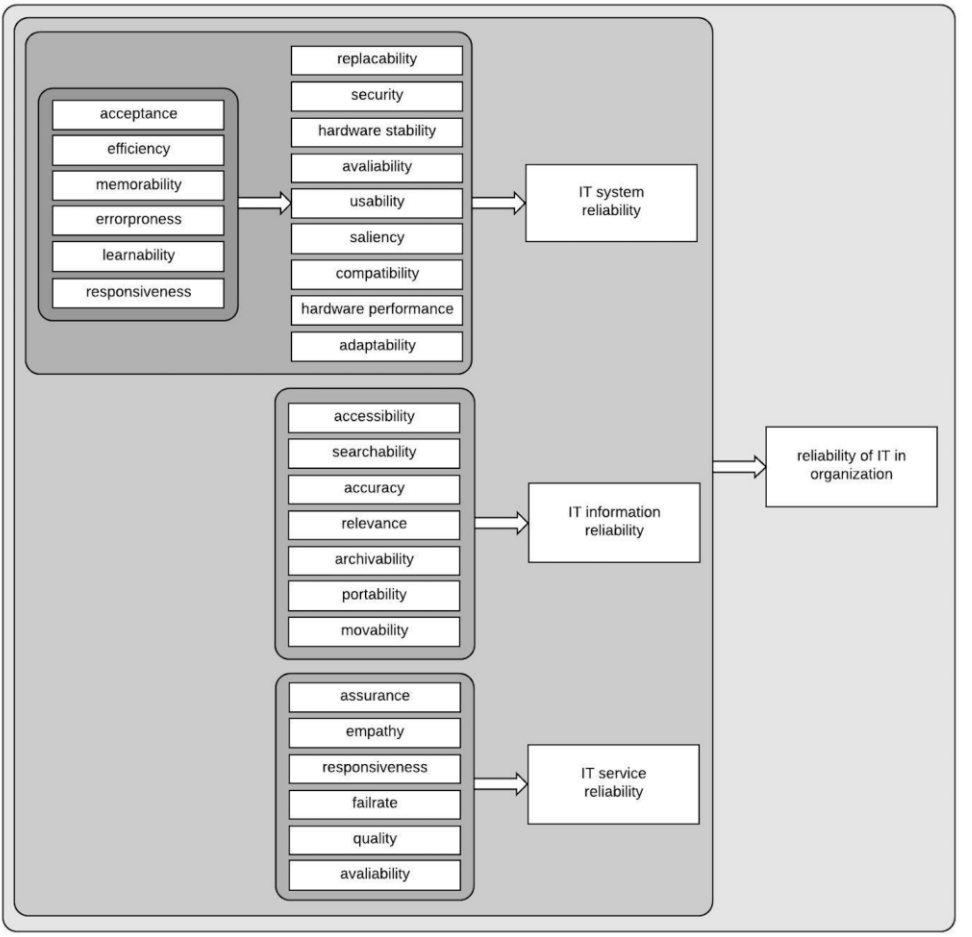
included in system reliability is an especially important aspect of IT reliability from the point of view of this paper. According to Finne (2005), Palmius (2007) and Yue (2015), usability is a notion embedded in the system quality itself and is an important factor determining the reliability of IT. That is mainly because even the most stable, accessible and secure IT will lose all of its reliability when users are unable to use it properly.

Figure 1 | Verified IT reliability model



Source: Tworek (2019).

1.2 IT User Experience

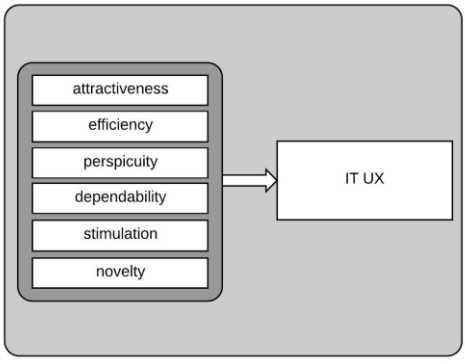
It is important to underline that User Experience is often mistaken with usability, which is not surprising since the User Experience methods and measures are largely drawn from usability (Tullis & Albert, 2008). However, these are not equal notions. Usability of IT has various interpretations in the literature and ISO norms, depending on the point of view. ISO 9126-1 defines it as good user interface design, Cockton (2004) defines it as an ease of the product use, Väänänen-Vainio-Mattila et al. (2008) define it as good user performance and various ISO norms add to this performance additional attributes like satisfaction (ISO 9241-

11) or User Experience (ISO 9241-210). Hence, it can be seen that IT User Experience is just a specific element of usability notion.

ISO 9241-11 defines User Experience (in general) as “all aspects of the user’s experience when interacting with the product, service, environment or facility”. However, the explanation of the true meaning of User Experience in case of IT use needs some more clarification. IT User Experience can be understood in at least three different ways, which should somehow merge together for a comprehensive definition of this notion. Therefore, based on the works of Law et al. (2014) and Bevan (2008), it should be stated that IT User Experience can be understood as a set of attributes of IT, such as aesthetics, design, ease of use, which are created and developed to facilitate a good experience among IT users. Moreover, the individual user has its own pragmatic and hedonic aims, which show prioritization of the importance of those attributes shape for perceiving IT User Experience by the user (Hassenzahl, 2003). However, the actual IT User Experience can be observed while using the IT, when that prioritization is a basis for a user evaluation of IT creating the measurable consequences of using IT, such as pleasure or satisfaction.

The IT User Experience consists of 6 factors, which were described in detail by Laugwitz et al. (2008) and gather various attributes of IT: attractiveness (gathering general impression towards IT), efficiency (understood as the possibility of fast and efficient use of IT), perspicuity (understood as ease of use and learn how to interact with IT), dependability (understood as a sense of control over IT and its predictability), stimulation (gathering a set of consequences from using IT) and novelty (understood as innovation and creativity level of IT design). Figure 2 presents a full version of IT User Experience developed by Laugwitz et al. (2008).

Figure 2 | Verified User Experience IT model



Source: Laugwitz et al. (2006).

1.3 Literature review and hypothesis development

The simple analysis of the definition of IT reliability and IT User Experience seems to be enough to assume that User Experience is an important factor, which may have the ability to influence IT reliability, especially in case of reliability of its use (usability). As underlined by many authors presenting lists of IT attributes (e.g. Finne, 2005; Palmius, 2007; Yue, 2015) usability perceived by the user (which translates into IT User Experience) is a notion,

which is deeply embedded and connected with the system quality, which is determining the reliability of IT in organization (Tworek, 2019). IT User Experience seems to be a prerequisite for obtaining the reliability of IT usage, mainly because – as stated before - IT is not able to be reliable when users are unable to use it properly. Therefore, based on that reasoning it is logical to propose the initial hypothesis:

H1: *There is a positive relation between IT reliability (and all of its components) and IT User Experience (and all of its components).*

As stated before, the notions of IT reliability and IT User Experience are perceived by the user, and its positive evaluation of them is crucial for obtaining the reliability of IT in an organization (Goodhue, 1995; Tworek, 2019). What's more important, the perception of IT will have a much greater significance in case of employees, whose job is dependent on IT support than in case of those, who are able to perform it without IT support. Almost all frameworks for analysis of IT in the organization has an underlining assumption that the importance of perception of user is rising together with the irrevocability of IT use to perform the given tasks (Goodhue, 1995; DeLone & McLean, 2003; Tworek, 2019).

Hence, it seems that in the case of User Experience IT, the irrevocability is especially important. The User Experience with using IT will not have a significant impact on its reliability in the case of employees, who do not need to use it to perform their tasks. However, in case of those depending on IT support, IT User Experience might have increasing importance for IT reliability. Based on that, the following hypothesis is formulated:

H2: *IT User Experience has a stronger influence on IT reliability when employees are more frequently using IT during task performance.*

Moreover, assuming that more advanced economies are characterized by higher adoption of IT (Tworek, 2019; Patrakosol & Lee, 2009) than less advanced economies, where IT importance is still growing, the following assumption may also be true for different business contexts. If the above-mentioned assumptions are true, in more advanced economies, the impact of IT User Experience should be more significant than in less advanced ones. Therefore, the additional hypothesis is added:

H2a: *IT User Experience has a stronger influence on IT reliability in organizations operating in a more advanced economy than those operating in a less advanced economy.*

However, the perception of the user concerning used IT is highly dependent on many factors. Among them, job characteristics seem to be the most important ones. That is mainly because not only the frequency and complexity of use of IT is highly dependent on the type of tasks which are fulfilled by the employee and the characteristic of the job position (Goodhue, 1995; Ammenwerth et al., 2006), but also IT User Experience has a various impact on IT reliability depending on those characteristics. The importance of this issue might be underlined by the fact that it emerged in the literature in various models, e.g. Task – Technology fit (Goodhue, 1995; Dishaw & Strong, 1999), Technology-to-Performance Chain (Staples & Seddon, 2004), Technology Acceptance Model (Davis, 1986), FITT framework (Ammenwerth et al., 2006).

There are three basic features of tasks performed by the employees: structurization, complexity and uniqueness. Task-technology fit theory states that IT should be aligned with tasks it is designed to support (Ammenwerth et al., 2006). According to Klopping & McKinney (2004), Task-technology fit model is based on the fact that technology adoption depends on the fact of how well the new technology fits the requirements of performed tasks. According to various authors (e.g. this fit is influencing perceived ease of use of IT. Moreover, as confirmed by Dishaw & Strong (1999), it influences perceived ease of use, not the usability of IT itself. Hence, it may be assumed that IT User Experience not only has the potential to influence IT reliability, but this potential is strengthening in situations (task characteristic), in which obtaining task-technology fit is harder. It seems that some types of tasks might be more susceptive for the influence of IT User Experience. Based on that it might be assumed that their characteristics may moderate the impact of IT User Experience on IT reliability. The reasoning behind this assumption is based on the fact that the significance of IT User Experience is rising together with the need for unpredictable and untypical use of IT. When tasks performed by employees are repeatable, well-structured and not complex, it is easier to learn how to use IT efficiently and repeatedly use the same (already known and tested) functionalities. When tasks are more complex, the number of functionalities needed for use is rising, and the significance of IT User Experience for its efficient use is also rising. When tasks are less structured, the probability of use of various functionalities in untypical combinations is rising, and the significance of IT User Experience for its efficient use is also rising. And finally, when tasks are becoming more and more unique, the need for untypical use of IT is most significantly rising and hence, in this case, the IT User Experience importance for IT efficient use should be the highest. Based on that, the following hypotheses are formulated:

H3: *IT User Experience has a stronger influence on IT reliability when tasks performed by the employee are more complex.*

H4: *IT User Experience has a stronger influence on IT reliability when tasks performed by the employee are less structured.*

H5: *IT User Experience has a stronger influence on IT reliability when tasks performed by the employee involve solving problems that require unique solutions and do not have obvious answers.*

The overview of the hypothesis is presented in Figure 3 and concerns both the initial hypothesis and the ones concerning the moderating effect of various factors on the relation between IT User Experience and IT reliability.

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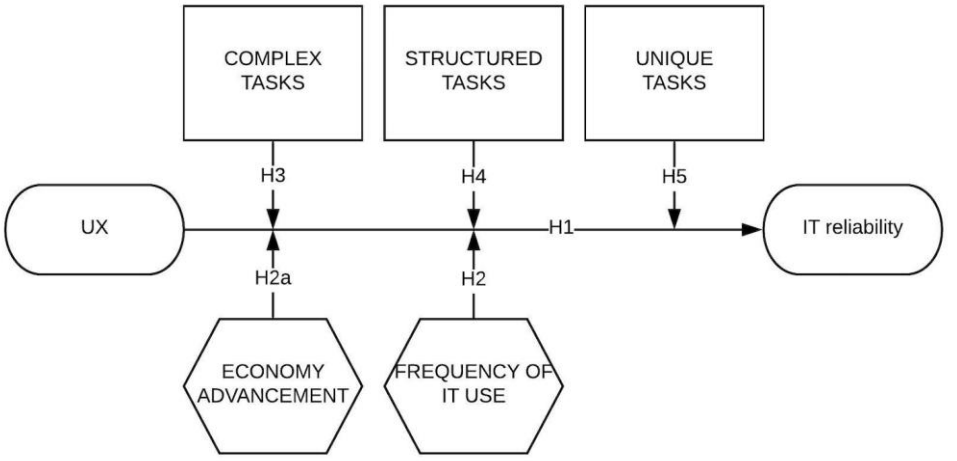
Figure 3 | Developed hypotheses



Source: author.

2 Research methodology and results

The survey was performed for the verification of the proposed hypotheses, and its main aim was the identification of the level of individual job characteristics, IT reliability and User Experience among employees working in organizations in two business contexts. The pilot survey preceded the main survey and was conducted in November 2018 among a group of 50 employees from various organizations. According to obtained results, some of the proposed questions were rewritten in order to facilitate a more informative response from the respondents participating in the main survey. The main survey was performed in December 2018, among employees from organizations located in Poland and USA, which was the only condition limiting the sample (employees were surveyed regardless of their age, tenure, job position etc.).

The research sample contains the employees of organizations operating in Poland and USA. 550 valid responses were collected (including 303 from Poland and 247 from the USA). The sample cannot be considered as a representative since the population of employees in those two countries is finite but very large, and the method of including employees in the sample do not support its representativeness. However, it is sufficiently diversified (considering the diversity of employees' characteristics and organizations characteristics as well) to be a basis for overall conclusions concerning the given topic. Sample characteristics are presented in Table 1 and Table 2; they clearly show that the sample is covering a diverse group of employees from a diverse group of organizations.

The diversity of employees is especially important in case of the relations considered in this paper since all analyzed variables are highly susceptible to the job position of a respondent.

Table 1 | Research sample characteristics from Poland and USA – organization perspective

Organization size	Manufacturing	Service	Trade	High-tech	Total
Micro (below 10 people)	45	76	69	77	267
Small (11-50 people)	16	20	4	0	40
Medium (51-250 people)	20	38	3	16	77
Large (above 250 people)	37	102	5	22	166
Total	118	236	81	115	550

Source: author.

Table 2 | Research sample characteristics from Poland and USA – employees' perspective

Job position	Average tenure	Number
Lower level management	8.79	107
Middle-level management	9.84	173
Higher level management	10.72	142
Production / service employee	8.51	128
Total	9.55	550

Source: author.

2.1 Variables measurement

Key variables were defined for the purpose of hypotheses verification: *IT reliability, IT User Experience, structured tasks, complex tasks, unique tasks, frequency of IT use and country of origin*. Respondents evaluated all variables concerning job characteristics basing on the list of statements shown in Appendix 1 and using the Likert scale (the scale from I strongly agree to I strongly disagree with a middle point: I do not have an opinion).

IT reliability concerned all IT solutions used in the organization using a Likert scale, (for IT reliability the scale from very poor to very good with the middle point: fair). It seems to be a valid choice, mainly because of the reliability of IT in an organization is a very subjective notion. It seems that the best source of knowledge concerning IT reliability is employees own perspective and opinion since their perception matters the most in case of making IT reliable. It is important to underline that IT influences the organization mainly through its potential to influence the every-day work of the employees. Based on that assessment one key variable was defined: *IT reliability* (consisting of IT system reliability, IT information reliability, IT service reliability as shown in Appendix 1).

IT User Experience in the organization was based on a 26 items questionnaire proposed by Laugwitz et al. (2008). It includes the measurement of six factors: Attractiveness, Perspicuity, Efficiency, Dependability, Stimulation, and Novelty. All studies performed by authors concerning the original German questionnaire and an English version indicate a satisfactory level of reliability and construct validity (Laugwitz et al., 2008). Respondents were asked to indicate their opinion about information systems based on the list of mutually exclusive characteristics (as shown in Appendix 1).

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2.2 Descriptive statistics and reliability analysis of scales

As the first step in a research process, the reliability of scales of each variable was verified for the obtained research sample. The results of the analysis of the reliability of the measurement scales are presented in Table 3. It is worth underlining that Cronbach's α was high for *IT reliability* and *IT User Experience*, which indicates a high internal reliability of the scales and measurements. For job characteristics, it was impossible to calculate it since they were measured by 1 item.

Table 3 | Defined variables along with the results of the reliability analysis of scales

No.	Variable	No. of scales	Alfa-Cronbach
1	IT reliability	4	0.837
2	IT User Experience	26	0.970
3	Structured tasks	1	--
4	Complex tasks	1	--
5	Unique tasks	1	--
5	Frequency of IT use	1	--
6	Country of origin	1	--

Source: author.

2.3 Relations between IT reliability and IT User Experience

In order to verify hypotheses H1, the correlation between *IT reliability and IT User Experience* components was calculated as the first part of the study. The correlation between *IT reliability* components and *IT User Experience* components were analyzed with the use of Pearson's correlation in order to verify the hypothesis H1, and the obtained results are presented in Table 4.

Table 4 | Correlation analysis between the IT reliability and User Experience

Correlation	IT system reliability	IT usage reliability	IT information reliability	IT service reliability
IT User Experience (attractiveness)	r(550)=0.441**, p<0.001	r(550)= 0.636**, p<0.001	r(550)= 0.400**, p<0.01	r(550)= 0.611**, p<0.01
IT User Experience (efficiency)	r(550)=0.340*, p<0.001	r(550)= 0.501**, p<0.001	r(550)= 0.288**, p<0.01	r(550)= 0.521*, p<0.01
IT User Experience (perspicuity)	r(550)=0.367*, p<0.001	r(550)= 0.571**, p<0.001	r(550)= 0.372**, p<0.01	r(550)= 0.541**, p<0.01
IT User Experience (dependability)	r(550)=0.399**, p<0.001	r(550)= 0.582**, p<0.001	r(550)= 0.351**, p<0.01	r(550)= 0.546**, p<0.01
IT User Experience (stimulation)	r(550)=0.462**, p<0.001	r(550)= 0.624**, p<0.001	r(550)= 0.407**, p<0.01	r(550)= 0.605**, p<0.01
IT User Experience (novelty)	r(550)=0.382**, p<0.001	r(550)= 0.545**, p<0.001	r(550)= 0.365**, p<0.01	r(550)= 0.543**, p<0.01
IT User Experience	r(550)=0.431**, p<0.001	r(550)= 0.624**, p<0.001	r(550)= 0.393**, p<0.01	r(550)= 0.607**, p<0.01

Source: author.

The results show that all components of *IT reliability* are statistically significantly correlated with all components of *IT User Experience*. Moreover, the obtained results show that the highest value of r-Pearson correlation occurs in case of usage reliability and *IT User Experience* (and all its components). Therefore, it confirms that indeed *IT User Experience* is most significantly influencing the usability of IT. The relation between *IT User Experience* and *IT usage reliability* seems to be logical, and the fact that obtained results confirmed that it is the highest from all components of *IT reliability* has its merits. It is mainly because *IT User Experience* is directly linked to the perception of the user and user's opinion concerning the IT and the obtained results are confirming that assumption. The initial IT reliability model developed by Tworek (2019) was aimed at overall, complex evaluation of IT used in an organization and even then it was assumed that *IT usage reliability* is a component which might need supplementation with a notion more detailed. Because correlation analysis does not verify the cause-effect relation, the obtained results are not enough to accept the H1 hypothesis. However, it is enough for an initial verification allowing for using it to build a regression model in order to fully confirm the H1 hypothesis and verify further hypotheses formulated above.

In order to do that and to verify the hypotheses, the regression analysis with the moderator was performed.

2.4 Moderators analysis for the relations between User Experience and IT reliability – research results

The relation between *IT User Experience* and *IT reliability* (hypothesis H2 – H5) was analyzed in the context of the *frequency of use, country of origin* and *job characteristics* to verify the statistical significance of them as moderators of the given relation. The hypotheses were tested using regression analysis with the moderator. The statistical reasoning was based on the moderated regression analysis procedure in all cases. In every case, a moderator was introduced as a new variable. It was built as a product of two independent variables, which have been standardized (*User Experience* as a first independent variable and *frequency of use, country of origin* or *job characteristics* as a second independent variable). Next, using Process macro for IBM SPSS Statistics, three regression models were built for every case. The first one was built as a base one for comparison and only independent variables (*frequency of use, country of origin* or *job characteristics* as a second independent variable) were added as predictors. The second one was built using not only independent variables (*frequency of use, country of origin* or *job characteristics* still as a second independent variable) but also the moderator as predictors. The aim was to verify the occurrence of the moderating influence in the entire sample. To confirm it, the third one was built using as predictors only moderator and one independent variable (without *frequency of use, country of origin* or *job characteristics* as a second independent variable). The results of the analysis are presented in Table 5.

The moderated regression analysis is a basis for two conclusions. First of all, the R2 obtained for all models allows for concluding that there is indeed a cause-effect relation between *IT User Experience* and *IT reliability*, which is enough for final acceptance of the H1 hypothesis. Second of all, the obtained results clearly show that the moderating effect occurs in case of *complex tasks, unique tasks, frequency of IT use* and *country of origin*. However, as shown in Table 5, the moderating role was definitely the highest in case of

country of origin and in case of job characteristics: *unique tasks*. Therefore, as shown in Figure 4, obtained results are the basis for positive verification and acceptance of hypotheses H2, H2a, H4 and H5. The hypotheses can be accepted stating that the higher uniqueness and complexity of tasks and the frequency of IT use, the stronger the influence of IT User Experience on IT reliability. Moreover, the more advanced the economy, the stronger the influence between the variables.

Table 5 | Regression models' statistics

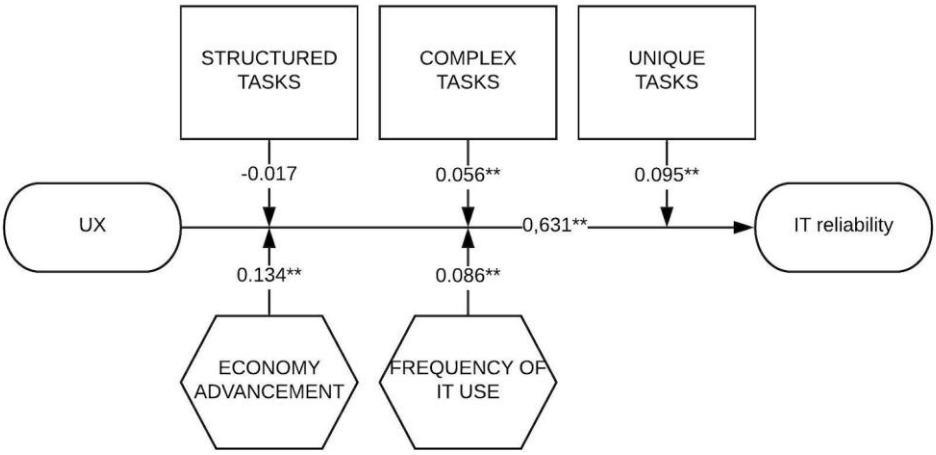
Model description	*R^2*	*Delta R^2*	*Moderator coeff.*	*Standard error*	*t stat*	*p-value*
IT User Experience, Structured tasks, Moderator *dependent v.: IT reliability*	0.449	0.001	-0.017	0.024	-0.705	0.481
IT User Experience, Complex tasks, Moderator *dependent v.: IT reliability*	0.467	0.005	0.055	0.024	2.288	0.022
IT User Experience, Unique tasks, Moderator *dependent v.: IT reliability*	0.467	0.023	0.095	0.019	4.820	0.001
IT User Experience, Frequency of IT use, Moderator *dependent v.: IT reliability*	0.497	0.006	0.086	0.034	2.552	0.011
IT User Experience, Country of origin, Moderator *dependent v.: IT reliability*	0.429	0.014	0.134	0.036	3.714	0.001

Source: author.

3 Discussion

The empirical research allows concluding that indeed, IT User Experience has a significant impact on IT reliability and potential for building it. The verified set of hypotheses is presented in Figure 4. The obtained results confirmed that IT reliability is highly dependent on IT User Experience and when users are unable to use IT properly, its reliability is lower. Therefore, the initial hypothesis is fully supported by the research. Moreover, the frequency of use of IT appeared to be a significant moderator of this relation furthermore confirming that the significance of IT User Experience perception of employees for IT reliability is rising together with employees' dependence on IT support. Also, it is important to underline that the country of origin, which to some extent can translate into economy advancement indicator, appeared to be the most significant moderator confirming that in organizations from the USA the influence of IT User Experience on IT reliability is stronger than in organization from Poland.

Figure 4 | Verification of proposed hypotheses



Source: author.

Based on those initial findings, the obtained results also allow to state that IT User Experience is more important in the case of employees, who are performing unique and complex tasks, which need IT support. It seems to be consistent with the view, which can be found in the literature. However, the results allow for more comprehensive insights concerning this notion. First of all, it seems that in case of tasks, which are more unique, and require some problem solving which goes beyond typical activities, the use of IT for their support is less predictable. Hence, it is hard to predict the employee's needs and implement functionalities exactly aligned with those needs. Such an employee is more likely to use the available IT solutions in their own way, in order to facilitate the support of activities, which is needed. Hence, the IT User Experience plays a much more important role in such an interaction between employee and IT solution. The more user – friendly and adaptable is the IT solution, the better chance for its efficient use for tasks, which were not directly implemented into available functionalities. Second of all, the obtained results confirm that task uniqueness is most significantly moderating the relation between IT User Experience and IT reliability, which is consistent with initial assumptions that when tasks are becoming more and more unique, the need for untypical use of IT is most significantly rising and hence, in this case, the IT User Experience importance for IT efficient use should be the highest.

Conclusions

The main aim of this article was to analyze the potential role of job characteristics influence on the strength of the relation between IT User Experience, and reliability of IT used in the organization in the context of the frequency of IT use and economic advancement. The obtained results allowed for the main conclusion, stating that: IT User Experience has the potential to influence the reliability of IT used in the organization. Moreover, it appeared that various job characteristics might boost the strength of this impact. The research results allow for concluding that the more unique are tasks performed by an employee, the more

significant is the influence of IT User Experience on IT reliability. The same conclusion is true for tasks complexity. However, the strengthening role is less significant in this case.

Therefore, the main contribution arising from the performed empirical research concerns the fact that IT User Experience role in shaping IT reliability differs depending on the type of tasks performed by the employee. Its role is rising with the rise of complexity and uniqueness of tasks. Therefore, the more complex and less routine are the tasks, the more important is the role of IT User Experience in shaping IT reliability, which is true mainly because such tasks need an untypical use of IT, which is designed for their support. The better the IT User Experience, the easier it is for the employee to design and implement the way of performing the task with the use of IT. It also seems to be a source of important implications for managers and practitioners: the more unique is the scope of the task of your employee, the more important is that employee perception concerning IT used to support those tasks (concerning ease of use, usefulness and willingness to use it).

It is also worth underlining that the performed research allows for the positive verification of assumption that more advanced economies are characterized by higher adoption of IT than less advanced economies, where IT importance is still growing and based on that – in more advanced economies, the impact of IT User Experience is more significant than in less advanced ones. However, performed empirical study is burdened with certain limitations. First of all, the research sample limited to 550 organizations and two countries allows forming conclusions concerning business context only in a small extent. The performed research may have a character of an initial first step confirming that organizations operating in Central Europe (e.g. Poland) are still less sensitive for IT support than those operating in North America (e.g. USA), characterized by a higher level of economic advancement.

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Appendix

Table A1 | Evaluation of IT reliability – survey items

Please share your opinion about information systems, which you are using on a daily basis:	I strongly agree	I agree	I do not have an opinion	I disagree	I strongly disagree
Information systems, which I am using to perform tasks are reliable (they are characterized by high availability, stability and security)					
Usability of those information systems is high (they are efficient, accepted and easy to use)					
The information included in those information systems are reliable (they are accurate, relevant and easily accessible)					
Support services for those information systems are reliable (they are available and responsive)					

Source: author.

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Table A2 | Evaluation of IT User Experience – survey items

Information systems, which you are using are:						
	1	2	3	4	5	
annoying						enjoyable
not understandable						understandable
creative						dull
easy to learn						difficult to learn
valuable						inferior
boring						exiting
not interesting						interesting
unpredictable						predictable
fast						slow
inventive						conventional
obstructive						supportive
good						bad
complicated						easy
unlikable						pleasing
usual						leading edge
unpleasant						pleasant
secure						not secure
motivating						demotivating
meets expectations						does not meet expectations
inefficient						efficient
clear						confusing
impractical						practical
organized						cluttered
attractive						unattractive
friendly						unfriendly
conservative						innovative

Source: author.