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# International Entrepreneurship Review

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CRACOW UNIVERSITY OF ECONOMICS  
Department of International Trade  
Centre for Strategic and International Entrepreneurship

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# On the role of communication and management engagement for acquisition success: A study of Israeli startups

Jan Polowczyk, Ofer Zaks, Piotr Trąpczyński

## ABSTRACT

**Objective:** The aim of this paper is to shed light on the effects of communication and management engagement on start-up acquisition success.

**Research Design & Methods:** The present paper adopts a behavioural perspective and uses a set of quantitative data collected from start-up companies from Israel, which were taken over by international firms, in order to explore the role of acquired firm's management. Particular emphasis is put on communication and the managerial engagement in the post-acquisition stage.

**Findings:** Partial empirical support for these relationships can be found. Subsequently, a number of avenues for future research are discussed.

**Implications & Recommendations:** Specifically, it is argued that communication and management engagement mediates the influence of a number of employee-related and organisational factors on acquisition performance.

**Contribution & Value Added:** Taking into account the significant failure rate of international acquisitions, the identification of their critical success factors is an important issue. This pertains also to the acquisition of start-ups by established firms, for which it is a strategy for enhancing their technological base. The paper also contributes to extant literature by adopting the acquired firm's perspective.

**Article type:** research article

**Keywords:** international mergers & acquisitions; performance; start-ups; post-merger integration; communication; management engagement

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## INTRODUCTION

Due to significant competitive pressures in the global environment, firms need to be able to introduce new products and services rapidly (Cefis & Marsili, 2006). Therefore, constant innovation plays a vital role for firm performance in the long run (Cai *et al.*, 2017; Cheng & Yang, 2017). Hence, established companies often recur to mergers and acquisitions (M&A) in order to benefit from the technological assets of smaller companies which pose a source of innovation (Zaks *et al.*, 2018).

Indeed, start-up acquisition can be regarded as a crucial way of enhancing the technological know-how by mature organisations (Agarwal & Helfat, 2009; Santos & Eisenhardt, 2009). However, in spite of their vital role for firm competitiveness, a significant number of technological M&A do not meet their objectives (King *et al.*, 2008). This may be related to the fact that the know-how which is accessed by the acquiring firms is mostly complex, contextual and rooted in a interpersonal networks (Ranft & Lord, 2002). Furthermore, M&A targets are often small and medium-sized enterprises (SMEs), as well as start-up companies. Hence, the risk that the business cultures and processes of the acquiring and acquired firms will not be aligned, is even higher (Popli *et al.*, 2017). And yet, in extant literature many



M&A-related studies concentrate on the success factors on the side of the acquiring firm (Becker *et al.*, 2016; Cheng & Yang, 2017; Rahman *et al.*, 2016).

In fact, the behavioural side of M&A has long been analysed from the viewpoint of various approaches, such as the individual psychological view (Amiot *et al.*, 2006; Angwin *et al.*, 2015), the social view (Terry *et al.*, 1996), or the cultural perspective (Jordão *et al.*, 2014). To a large extent, though, this research has been inconsistent in its approaches and findings (Seo & Hill, 2005). Extant research has indicated that the performance of M&A is indeed dependent on the behaviour of the target firm's employees, including particularly trust (Inkpen & Currall, 2004; Stahl *et al.*, 2012) and commitment to change (Van Dam, 2005; Wanberg & Banas, 2000).

On the other hand, organisational variables affected by the acquirer, such as the extent of know-how transfer towards the target firm (Junni *et al.*, 2015; Zollo & Meier, 2008), or the extent to which the target firm may remain autonomous (Whitaker, 2012), were also examined. At the same time, in light of extant knowledge it seems that those variables in themselves do not guarantee success, since appropriate communications (Galpin & Herndon, 2007; Schweiger & DeNisi, 1991), or a significant involvement of the acquired firm's employees in the entire takeover (e.g. Graebner, 2004) can turn out to be indispensable for the success of acquisitions.

Therefore, the aim of this article is to shed some additional light on variables which mediate the influence of employee-related and organisational variables on start-up acquisition success. Specifically, departing from expectancy theory (Vroom, 1964), we concentrate on the role of communication and management engagement as mediators.

These research objectives are addressed empirically within the context of start-ups from Israel, which are taken over by foreign firms. For several decades now, Israel has witnessed a massive increase in the number of takeovers in the technological area (Avnimelech & Schwartz, 2009; Dashti *et al.*, 2008). Moreover, Israel has developed a strong reputation for a pronounced entrepreneurial culture, top-notch technological know-how and an environment which is conducive to start-up growth (De Fontenay & Carmel, 2004). The relevance of using this research context also resides in the fact that models addressing M&A practices have mostly been proposed based on the experience of bigger transactions. In the present study it is argued that acquired firm-level factors leading to the success of acquisitions may be more accentuated for small and medium sized enterprises (Weitzel & McCarthy, 2011).

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### Success determinants of acquisitions

#### Employee-related determinants

Extant research stresses the relevance of trust in the mutual contacts of managers with their employees as a foundation of organisational change (Gomez & Rosen, 2001; Trąpczyński *et al.*, 2018). With regard to acquisitions, the concept of trust is often used in the context of the relationship between the acquirer and the acquired firm. Particularly during the period after the announcement of an acquisition, which is characterised by intensive risk evaluation, trust is easy to erode, yet harder to repair (Krug & Nigh, 2001). A novel team of managers is usually mistrusted, since target firm employees may expect organisational changes which can affect their presence in the company (Hurley, 2006). Trust can pose an alleviating factor in relation to these employee fears (Van Dam, 2005). On the other hand, the readiness for change may be significantly afflicted if leaders behave in a different manner than what had been communicated to their subordinates (Simons, 2002). Therefore, on the whole, it can be expected that the employees' trust in management will positively affect the outcome of M&A.

Further, the readiness and openness to change is crucial from the point of view the results of the change process, since employees may display ambiguous feelings with regard to the change process (Piderit, 2000). The degree to which the members of an organisation can contribute to the change process is significantly dependent on the information sharing across a number of different channels, as well as on the involvement of employees both in the preparation and execution stages of the entire process (Armenakis & Harris, 2002).

The results of extant research indicate that participants of the change processes displaying higher commitment, also demonstrate superior readiness to change, as well as the acceptance of change (Madsen *et al.*, 2005). Studies exploring employee commitment have *inter alia* looked into its effects on turnover, job satisfaction and performance, or overall firm performance (Cooper-Hakim & Viswesvaran, 2005). Existing results point to the fact that negative attitudes of target firm's employees towards the acquisition may be among important factors explaining the failure of acquisitions. And yet, this relationship has rarely been verified empirically (Datta, 1991; Larsson & Finkelstein, 1999).

### **Organisational determinants**

Extant studies have particularly focused on the relevance of knowledge flows from the headquarters to its affiliates as an important factor explaining organisational outcomes (Minbaeva *et al.*, 2003; Zollo & Meier, 2008). Such knowledge flows from the acquirer towards the acquired firm are related to the level of resources which employees dedicate to learning from the parent company and implementing the obtained know-how (Minbaeva, 2007).

Conversely, transfers to the acquirer are usually related to the know-how possessed by employees, such as their competences and skills (Junni & Sarala, 2013). While knowledge transfers towards the parent firm have usually been connected to start-up takeovers, the flows towards the acquired firm can be conducive to post-merger performance (Junni *et al.*, 2015; Oberg & Tarba, 2013). There is a number of variables influencing the effectiveness of the knowledge transfer, such as the social ties between the members of both organisations (Vaara *et al.*, 2012). On the whole, it can be expected that the knowledge transfer from the acquiring organisation will positively affect acquisition success.

Further, we posit that the strategy of the acquirer with regard to the autonomy granted to the target firm is another factor contributing to acquisition success. Although it may be necessary re-configure resources and integrate the two organisations so as to reap the benefits of the acquisition (Capron, 1999), the reduction of autonomy which is often triggered at the same time can actually contribute negatively to the entire transaction (Very *et al.*, 1997). Also, it should be noted that for an integration process to be successful, it requires significant involvement by the management, diverting the acquiring firm's attention from its own focus (Schoar, 2002).

Indeed, the integration-autonomy dichotomy may be particularly important in acquisitions of technology companies. This type of transactions is often driven by the willingness to gain access to compound know-how (Puranam *et al.*, 2002). However, the consolidation of both organisations can ultimately compromise the target firm's know-how if its employees leave the organisation (Ranft & Lord, 2002). And yet, previous studies have often regarded the consolidation of the acquirer and the acquiring firm as a phenomenon to which the target firm is subjected, instead of acknowledging it as a process in which the management team of the target firm ought to take part to a significant extent.

### **Managerial involvement by the acquired firm**

It is crucial to note that the success of an acquisition is contingent upon the responses of the management team of the target firm to any modifications of their mandate and scope of autonomy (Bezrukova, *et al.*, 2012). Thus, in the ensuing subsections, attention is devoted to the significance of communication and managerial engagement on the part of the acquired firm.

### **Acquired firm's communication in the integration period**

Effective communication during the process of consolidation of the acquiring and acquired firms entails a significant volume of information to be provided in a transparent, understandable and fair manner (Gomes *et al.*, 2011). Within the integration stage of M&A, the role of communication is to enable employees to gain insights into the ongoing processes and therefore to adjust their own knowledge of what will be expected from them in the new reality of their organisation (Birkinshaw *et al.*, 2000).

Further, among the key factors contributing to an effective management of the acquisition process are the intensity and quality of related communications. The ambivalent responses of an organisation's members in the wake of an acquisition can be managed more effectively by recurring to well prepared

and executed communications (Marks & Mirvis, 2001). Providing realistic information to staff and management reduces undesirable uncertainty regarding jobs security, career advancement and the ongoing benefits associated with the acquisition (Galpin & Herndon, 2007).

### **Acquired firm's management engagement the post-acquisition integration**

From a theoretical perspective, expectancy theory emphasises the perceived odds that an outcome would indeed ensue as a consequence of a certain behaviour (Vroom, 1964). In the context of entrepreneurship, the subjective odds that a given new venture would lead to certain results is affected by personal opinions regarding the know-how required to leverage this business chance or the availability of resources which may be necessary for that goal (Feather, 1992). An important dimension of the acquired firm's involvement pertains to the presence of the founder of the start-up firm who plays a key role in such organisation and its culture. After the accomplishment of the acquisition, higher commitment of the target firm's employees can help the acquirer to reduce employee turnover in the acquired firm, especially if the founder is also actively involved in the integration process (Rhoads *et al.*, 2012). Accordingly, the acquisition of start-ups poses specific issues with regard to the decision as to whether to keep or replace the original top management team (TMT). Given that the founder is often inherently related to the technology which defines the start-up, as well as to the culture of the organisation, the engagement of him and his management team is a crucial prerequisite to ensure that employee-related factors can translate into success (Baum & Locke, 2004; Rhoads *et al.*, 2012).

### **Analytical framework and research hypotheses**

To summarise the literature review presented above, we argue that from a behavioural perspective, while a number of employee-related factors, as well as organisational variables pertaining to the approach of the acquirer towards the target firm, are essential for the success of the acquisition, they alone are not able to explain acquisition performance. Indeed, it is the role of the acquired start-up's management to design and implement an appropriate programme of communication about the deal, as well as demonstrate its active participation in the consolidation of both organisations, in order to address anxiety, doubts and open issues on the part of the members of the organisation. Only then can both the employee attitudes, and objective support from acquiring firm, translate into performance outcomes.

Accordingly, in line with our research goals, we propose several hypotheses on the mediating effect of managerial communication and management engagement.

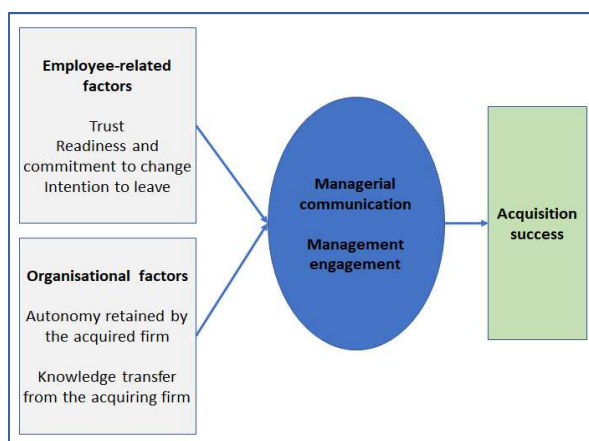
- H1:** The relationship between employee-related variables and acquisition performance is mediated by communication delivered to employees by the TMTs of the acquired firm.
- H2:** The relationship between organisational variables and merger success is mediated by communication delivered by the TMT of the acquired firm.
- H3:** The relationship between employee-related variables and acquisition performance is mediated by the engagement of acquired management during the post-acquisition integration.
- H4:** The relationship between acquired company's variables and merger success is mediated by the engagement of acquired management during the post-acquisition integration.

Figure 1 summarises the hypothesised relationships in a conceptual framework based on extant research.

## **RESEARCH METHODOLOGY**

### **Data collection and sample**

Our empirical study embraced high-tech start-ups from Israel which were taken over by foreign firms in the period 2009-2014 (Trąpczyński *et al.*, 2018). Respondents were identified based on data from a number of sources. The majority of firms were extracted from lists including start-ups acquired during 2009-2014. 125 invitations were sent via e-mail through Qualtrics™ to leaders and top managers during the first quarter of 2015. While 105 surveys were opened, 53 respondents completed the survey, which corresponds to a 58% response rate.



**Figure 1. Conceptual framework**

Source: own elaboration.

The size of the target firms varied from 5 to more than 200 employees, whereby 48% had 5-50 employees (see Table 1).

**Table 1. Sample characteristics**

Characteristics	Thresholds	# (N=53)	%
Number of employees (in the acquired company)/size	5-50	24	45.3
	51-200	13	24.5
	201+	16	30.2
Previous experience in M&A	0	25	47.2
	1	14	26.4
	2+	14	26.4
Age (group)	20-39	6	11.3
	40-59	42	79.2
	60+	5	9.4
Education	Bachelor degree	19	35.8
	Master degree +	34	64.2
	1-4	16	30.2
Tenure (years)	5-9	19	35.8
	10-	18	34.0
Time since the merger announcements ( years)	-2	16	30.2
	-4 less	22	41.5
	4+ more	15	28.3

Source: own study.

### Variables operationalisation

#### Dependent variable

Firstly, perceived performance was adopted as a measure of acquisition performance. Numerous studies pointed to the fact that the evaluations delivered by executives are correlated with performance items based on objective data (e.g. Homburg & Bucorius, 2006). While M&A outcomes are to a certain degree inherently unpredictable, there is certainly a link between the TMTs' genuine motivations and post-M&A performance (Coff, 1999). In the current study, out of nine potential questions regarding 'perceived performance', five were eventually chosen (Cronbach alpha= 0.87). Two examples of items for 'perceived performance' are: "To which extent your merger expectations before the acquisition were fulfilled?" and "Based on your perception, how many targets were accomplished?" The scale ranged from, 1(low) to 5(high).

Further, acquisition satisfaction was conceptualised as the degree to which an employee anticipates feeling satisfied in the aftermath of the transaction. Participants were asked to indicate their satisfaction with the acquisition process, their satisfaction with their involvement in the implementation of the acquisition and their satisfaction with management performance (1 = very dissatisfied to 5 = very satisfied). Out of seven potential questions five were eventually chosen to measure satisfaction (Cronbach alpha = 0.89).

### **Mediating variables**

The first mediator pertains to communication within the stage of integration of both companies, which can be described as the provision of information to employees with regard to various issues related to the integration process (see e.g. Jimmieson *et al.*, 2004). The overall reliability alpha for integration characteristics amounted to 0.79. Further, the quality of information pertaining to the change process was also captured with a four-item measurement scale adapted from Wanberg and Banas (2000). Questions were asked on a 5-point Likert-type scale, whereby 1 = strongly disagree and 5 = strongly agree. Six questions representing the quality of communication variable were chosen for this present study (out of fourteen potential questions). The alpha obtained was 0.75.

Secondly, with regard to management engagement, in line with Graebner (2004) it was operationalised as a binary variable, set up as a dummy variable depending on whether the target firm retained its management team or whether they were substituted for by professional managers hired by the acquirer. Another item was added in order to measure the time period of the TMT presence following the acquisition public announcement.

### **Independent variables**

As far as employee-related variables go, questions on trust were related to employees' beliefs with regard to the management's trustworthiness and fairness. Out of eleven potential questions based on extant literature (Oreg, 2006), the survey ultimately included six questions regarding trust. Items were operationalised on a five-point scale (with Cronbach's alpha amounting to 0.63).

Readiness for change was operationalised by the use of two types of scales: the first one by Holt *et al.* (2007) to evaluate the readiness at an individual level and the second by Meyer and Allen (1997) to assess affective organizational commitment. Seven questions represent this variable in our study (out of twelve that were judged and evaluated).

As far as organisational variables are concerned, autonomy removal was operationalised with three items regarding asymmetric shift in control from one firm to the other: (a) financial control, (b) administrative control and (c) operational control. After adding three further questions adopted from earlier studies (Ranft, 2006; Very *et al.*, 1997), we finally constructed a scale with altogether six items and the alpha of 0.88.

Moreover, in line with Schoenberg's (2006) study, we measured knowledge transfers between both organisations with regard to 11 areas. Ten items were chosen with Cronbach's alpha 0.88. The scale consistently ranged from 1 to 5.

### **Control variables**

Acquired company's size was evaluated by asking respondents to provide the employment size before the acquisition. Prior experience with M&A was operationalised as a binary variable (presence or lack of experience). Managers were also requested to provide the information how many M&A they had experienced. Finally, respondents were requested to provide the sector in which their company is active.

### **Analytical procedures**

This section presents the statistical procedures that were used in order to obtain a first understanding and then to analyse the data obtained through the Qualtrics survey system. It is important to present the basic descriptive statistics, presented in Table 2. The table includes the basic data (min, max, mean & standard deviation - S.D.) of the quantitative research variables: dependent, independent and mediators.

Subsequently, several Pearson correlation tests were carried out to provide an initial understanding of the relationships between the research variables. As indicated in Table 3, Pearson correlations are in general in line with the expectations formulated in the research hypotheses, hence providing some initial support for the studied relationships.

**Table 2. Descriptive statistics**

Variable	Min	Max	M	S.D
Retained autonomy	1.00	5.00	2.61	0.88
Knowledge transfer	1.00	5.00	3.15	1.03
Trust	1.33	5.00	3.27	0.88
Readiness and commitment to change	1.80	4.80	3.75	0.68
Intention to leave	1.00	5.00	3.08	1.17
Communication	1.00	5.00	3.31	0.86
Perceived performance	1.00	5.00	3.00	0.95
Satisfaction with acquisition	1.00	5.00	2.99	1.12
Management engagement after acquisition	0.00	1.00	0.89	0.32

Source: own study.

**Table 3. Pearson correlations**

Variables	1	2	3	4	6	7	8
Retained autonomy (1)							
Knowledge transfer (2)	0.038						
Trust (3)	0.267*	0.184					
Readiness & commitment (4)	0.188	0.144	0.516**				
Intention to leave (5)	-0.364**	-0.176	-0.359**	-0.253*			
Communication (6)	0.221	-0.003	0.709**	0.586**	-0.337**		
Performance (7)	0.058	0.362**	0.524**	0.245*	-0.516**	0.398**	
Satisfaction with acquisition (8)	0.150	0.382**	0.704**	0.327**	-0.508**	0.519**	0.834**

Levels of significance: \*  $p < 0.05$ . \*\*  $p < 0.01$ . \*\*\*  $p < 0.001$

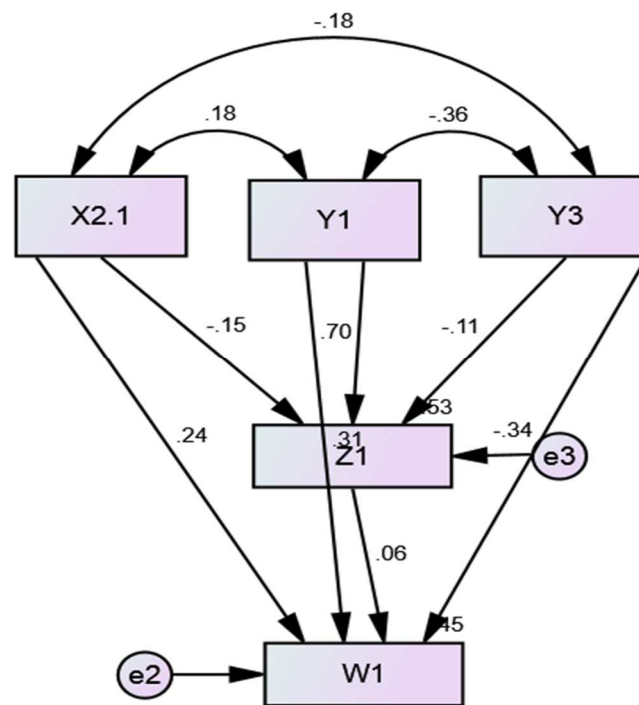
Source: own study.

Before focusing on the main results, it is crucial to note that most control variables had no significant influence over the study variables. However, some significant relationships were detected between the employment size of the acquired company and the other variables. More specifically, it was found that in large companies (more than 200 employees), there was a significant lower engagement of management participation in the integration process. Similar results emerged in relation to the variables of 'trust', 'readiness and commitment', 'communication' and 'satisfaction', where significant differences between small and large size organisations were detected. No significant effects were identified in relation to 'previous experience with acquisitions'.

After conducting descriptive statistical tests, we recurred to a series of path analyses which offers the advantage of directly testing the specified mediation model (Edwards & Lambert, 2007). While path analysis can be regarded as a particular form of structural equation modelling (SEM), it has become widespread in research in which small sample size limits the application of a complete structural equation (Chaudhuri & Holbrook, 2001). Path analysis is a form of multiple regressions focusing on causality. Overall, this method entails verifications of direct, indirect, and total effects of various values of the mediating variables. In order to address our hypotheses regarding the mediation effect of management's communication, as well as management engagement, separate path analyses were conducted. The models presented in the ensuing section consist of diagrams that specify the independent, mediating, and dependent variables, whereby regression weights are predicated by each computed model. Single-headed arrows show the causality between all variables.

## RESULTS

In the first path analysis, shown in Figure 2, the mediating effects of management's communication on the linkages between independent variables and acquisition performance, was examined. The findings indicate that management's communication is a significant mediator, although it has a relatively weak effect. Among the independent variables out of the five studied ones, only 'trust', 'intention to leave' (among employee-related variables) and 'knowledge transfer 1' (among organisational variables) turn out to be statistically significant.



**Figure 2. Path analysis model for 'perceived performance'**

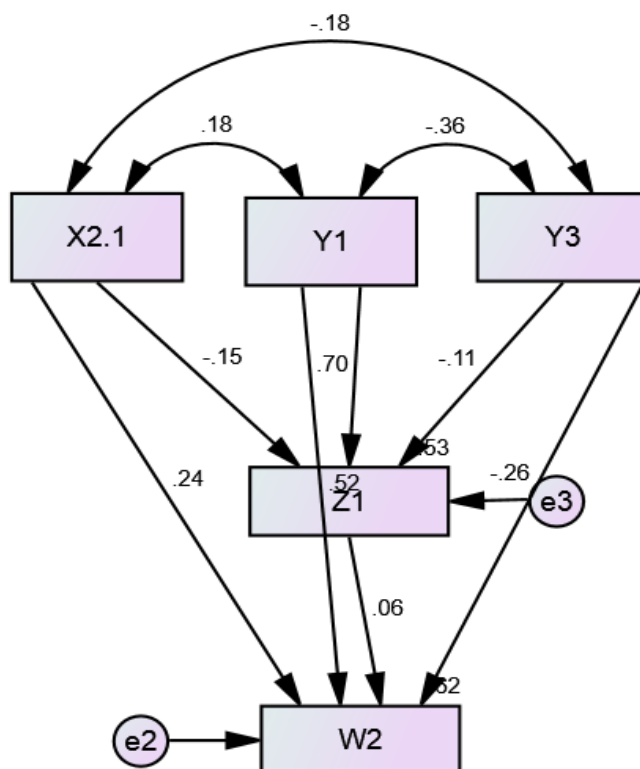
Annotation: dependent: W1 – perceived performance; mediator: Z1 – management's communication), independent variables: (X2.1 – retained autonomy, Y1 – trust, Y3 – intention to leave).

Source: own elaboration.

In the second analysis, depicted in Figure 3, the mediation of management's communication on the relationships between independent variables and satisfaction with acquisition was examined. The model illustrates management's communication to be a significant mediator, albeit with a limited influence. Similar to the first analysis, mediation for only three independent variables turns out to be significant: 'trust', 'intention to leave' and 'knowledge transfer 1'.

Based on the two path analyses, it can be concluded that Hypotheses 1 and 2 were only partially supported by the results. The empirical evidence points to partial mediation, whereby the mediating variable accounts for a part of the relationship between the main research variables. In fact, there is not only a statistically significant linkage between managerial communication and both performance and on the other hand its antecedents, but also some direct relationships between our dependent and explanatory variables.

So as to examine Hypotheses 3 and 4, we first examined the direct influence of the mediating variable on the research variables. Because 'managements' engagement' is a dichotomous (categorical) variable, a series of t-tests were conducted. As demonstrated in Table 4, 'trust' was the only significant difference between the groups, indicating that in companies where management was present during the acquisition process, the level of trust was higher than in companies where management was not present. No other significant differences were found between companies with or without management engagement during the acquisition process.



**Figure 3. Path analysis model for ‘satisfaction with acquisition’**

Annotation: dependent: W2 – satisfaction with acquisition; mediator: Z1 – management’s communication), independent variables: (X2.1 – retained autonomy, Y1 – trust, Y3 – intention to leave).

Source: own elaboration.

**Table 4. T-test for independent groups to analysis between ‘managements’ engagement’ and the other research variables**

Variables	No		Yes		t
	(n=5)		(n=48)		
	M	S.D	M	S.D	
Retained autonomy	2.26	0.53	2.65	0.90	-0.95
Knowledge transfer	3.00	0.85	3.16	1.05	-0.33
Trust	2.30	0.41	3.37	0.86	-2.73 **
Readiness & commitment	3.36	0.89	3.79	0.66	-1.34
Intention to leave	3.72	1.22	3.01	1.16	1.29
Communication	3.03	0.86	3.34	0.86	-0.76
Performance	2.56	1.13	3.05	0.93	-1.09
Satisfaction with acquisition	2.32	1.02	3.06	1.11	-1.43

\* p < 0.05. \*\* p < 0.01. \*\*\* p < 0.001

Source: own study.

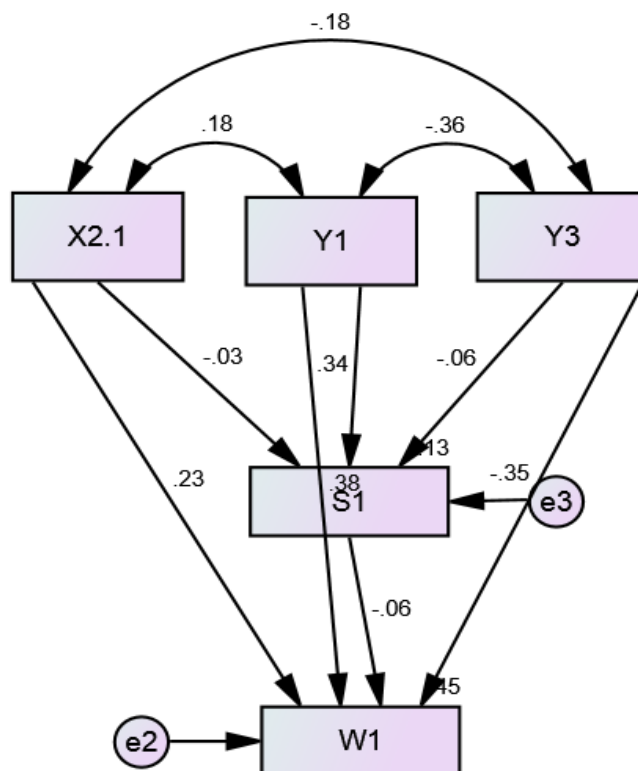
Next, two path analyses were conducted. In the first analysis, shown in Figure 4, the mediating effects of managements’ engagement on the relations between independent variables and performance after merger were examined. The findings indicate that both direct prediction and mediation are significant. Nevertheless, the level of mediation is relatively weak. Again, only three variables (out of six) are significant: ‘trust’, ‘intention to leave’ and ‘knowledge transfer 1’.

In the second path analysis, presented in Figure 5, the mediating effects of management’s engagement on the relationships between employee-related and organisational variables and satisfaction with acquisition were examined. This model indicates that both the direct prediction and mediation are sig-



nificant. Accordingly, the level of mediation is relatively weak. Like in the path analysis above, mediations for only three variables are significant: ‘trust’, ‘intention to leave’ and ‘knowledge transfer 1’.

Based on the two preceding path analyses, it can be stated that Hypotheses 3 and 4 were only partially supported, as the empirical data point to partial mediation. To summarise the main results of this study, it appears that both employees-related variables and organisational variables have some direct influence over acquisition success, and that management’s communication and engagement has a partial mediating effect on these relationships. This is consistent with our theoretical reasoning and findings from the literature review, as the employee reactions and the organisational arrangements between the acquirer and the acquiring company determine success, yet they require effective communication and involvement of the local management to fully secure performance.



**Figure 4. Path analysis model for ‘perceived performance’**

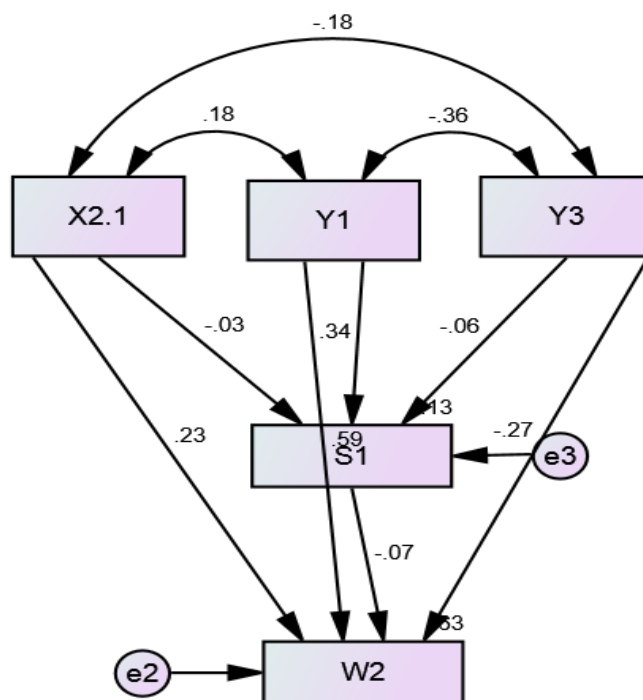
Annotation: dependent: W2 – satisfaction with acquisition; mediator: Z1 – management’s communication), independent variables: (X2.1 – retained autonomy, Y1 – trust, Y3 – intention to leave).

Source: own elaboration.

## DISCUSSION AND CONCLUSION

### Contribution to extant research

Various approaches common in studies on acquisitions have adopted individual or collective levels of investigation in order to explore behavioural aspects. Merely a limited amount of research focused on the firm level in order to explore behavioural issues related to the acquired firm. Furthermore, unlike the majority of the aforesaid studies, which concentrate on the acquiring firm’s standpoint, this paper explores the target firm’s view. In this paper we hypothesised the mediating effects of management engagement during the acquisition processes and the quality of communication delivered to the acquired company’s employees by the management team. Our hypotheses were partly supported, as we found evidence of a partial mediation.



**Figure 5. Path analysis model for 'satisfaction with acquisition'**

Annotation: dependent: W2 – satisfaction with acquisition; mediator: S1 – management's engagement), independent variables: (X2.1 – retained autonomy, Y1 – trust, Y3 – intention to leave).

Source: own elaboration.

The mediating influence of management's communication resonates with earlier findings from literature, although this variable was mostly explored as a direct influence. Extant M&A research has asserted that communication is crucial for a successful execution of the change process in an organisation (Schweiger & Denisi, 1991). Mistakes in managing the communications may lead to rumours, which can aggravate negative emotions accompanying the change process and add to resistance to change among organisational members.

Hence, in the event of lacking or delayed communication from the management team, the members of an organisation may gain knowledge about the change process through other channels, such as media (Richardson & Denton, 1996). Thus, start-ups, just like any other organisation, need to formally inform their employees on any critical change, including M&A intentions. Indeed, as Vinten (1999) argues, the idea that in smaller organisations communication is appropriately addressed through informal channels is no more than a myth. A leader's social competences are focal when attempting to pre-empt reactions on the part of the participants of the change process (Oreg, 2006).

On the other hand, while the related studies have agreed on the pivotal role of thoughtful communications, a number of researchers (e.g. Weber *et al.*, 2012) demonstrate that over communication ought to be evaded, since organisational members have to retain a certain degree of ambiguity so as to remain flexible and able to deal with a dynamically changing situation. In practice, the members of an organisation may tend to refuse to discuss the challenging issue of the acquisition, due to limitations of the possessed information or due to the pre-occupation with negative side effects of the deal. However, such avoidance on the manager's part, or a manager's negative attitude, may in itself be perceived as information by employees (George & Zhou, 2007).

With regard to the second of the stated mediation effects, our study corroborates earlier arguments about the relevance of the engagement of an appropriate leadership steering the change process. In fact, the main managerial competences which are crucial for a successful merger or acquisition pertain *inter alia* to carefully planning the timing of the integration process so as to complete it effectively. Not least, also the competence to motivate the members of both organisations

to demonstrate cooperative behaviour, is of vital importance. In particular, the founder of the target firm is a key individual who had shaped the organization in a significant manner (Shane *et al.*, 2003). It is the founder who is often closely associated with the sources of competitive advantage of the firm (Baum & Locke, 2004), thus having more influence over employee motivation and over the company culture than professional managers.

### Limitations and future research

It must be noted that this paper focused on the post-acquisition stage. Although extant research has indicated that the said stage is focal for the overall success of the deal, there are numerous other factors operating simultaneously at various stages of an acquisition. Thus, future studies measuring the influence of our research questions at various other parts of an acquisition deal may prove to be productive. The inclusion of the most influential contributors affecting each M&A stage will probably allow the construction of a more holistic model.

The conclusions of this paper may also be to some extent confined by the culture of start-up organisations in Israel. In fact, a national culture determines the ways in which international investors are perceived (Moschieri & Campa, 2014). Therefore, exploring the influence of national cultures on the acculturation process and outcomes of start-up acquisitions might yield different conclusions with regard to communication and management engagement during the integration after the acquisition deal. Furthermore, based on larger samples, a process perspective on changes in autonomy and its relationship with integration outcomes could be explored in a longitudinal design.

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### Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Entrepreneurial activity in Turkey: A statistical overview for the years of 2006-2020

Mustafa Toycan, Burak Erkut

## ABSTRACT

**Objective:** The objective of the article is to understand the development of Turkish entrepreneurial activity over the last 15 years.

**Research Design & Methods:** The research design employed in this article is a quantitative one, mainly by utilizing the data available from Global Entrepreneurship Monitor and Eurostat to map the structure and the development of Turkish entrepreneurial activity between 2006 and 2020. With respect to gender, age and education status of Turkish self-employed, the article also employs a chi-square test of association.

**Findings:** The main empirical results of this article identify that whereas the overall share of self-employed among the active Turkish population dropped from 24% in 2006 to 17% in 2020, this is not only above the EU-27 average, but also largely due to a drop in the share of own account workers. The article highlights that over the duration of 15 years, the share of job creators among the active Turkish population remained stable despite all the negative events occurred in Turkey. The article also identifies a gender imbalance in terms of self-employment, and a significant difference between educational background of own account workers and job creators.

**Implications & Recommendations:** Understanding the patterns of development of Turkish entrepreneurial economic activity in the last 15 years can serve as a point of departure for both entrepreneurship researchers and policymakers. For entrepreneurship researchers, the case not only allows for a cross-national comparison, but also delivers empirical evidence from a transition country. For policymakers, fluctuations in the number of own account workers deserve more attention whereas stability of job creators can be further analysed for understanding what makes this group particularly stable despite all the negative events that occurred over the last decade.

**Contribution & Value Added:** The study contributes to the literature by offering a current overview of Turkish entrepreneurial activity in the last 15 years. Since the literature on Turkish entrepreneurship is primarily dominated by topics such as students' entrepreneurial intentions, women entrepreneurship or migrant entrepreneurship, the study offers empirical evidence to see the bigger picture of Turkish entrepreneurial economic activity.

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## INTRODUCTION

Entrepreneurship plays a key role in a country's economic development. Entrepreneurship, described as "the actions of a risk taker, a creative venturer into a new business or the one who revives an existing business" (Herbert & Link, 1989) (p. 39), is the connecting link between new idea generation and market shaping, or matching the needs of people with technology or artefacts (Erkut, 2016). Entrepreneurial activity can be described as a subjective journey towards the competition as a discovery process in the words of Friedrich August von Hayek (Hayek, 2002).



Literature on economics and business mainly identifies entrepreneurship within the domain of evolutionary economics (Erkut, 2016). Evolutionary economics, as put forward by Ulrich Witt, is like a patchwork (Witt, 2014) where different traditions or directions of research observed the emergence and the dissemination of knowledge from different angles (Buenstorf, 2007). In the evolutionary economic literature, Witt distinguishes between Neo-Schumpeterians, Schumpeter himself, universal Darwinists and representatives of naturalistic approaches (Witt, 2008) where entrepreneurship is mainly elaborated within the domain of Neo-Schumpeterians.

Accordingly, entrepreneurial economic activities or an entrepreneurial orientation (Benazzouz, 2019) shapes the economic evolution by means of introducing new goods and services and thereby shaping new markets, or market segments, or bringing fresh wind into existing ones (Erkut, 2020). Because of this central role dedicated to entrepreneurship, it is important to analyse the entrepreneurial economic activities of individuals in a systematic way, especially regarding their role in economic evolution and growth.

The novelty of this study is to explore the entrepreneurial economic activities in Turkey from 2006 until 2020 by using statistics available via Global Entrepreneurship Monitor and Eurostat. Previous studies mainly dominated Turkish entrepreneurship research by means of focusing on students' entrepreneurial intentions and entrepreneurial activities of specific groups in Turkey (to be more precise, women and migrants from Syria). In comparison to these studies, the novelty of the article is providing a general overview of data on current Turkish entrepreneurial activity, also by investigating current Turkish self-employed by means of their gender, age, and education.

The objective of the article is therefore to understand the development of the entrepreneurial economic activity in Turkey from 2006 until 2020 by focusing on the patterns of Turkish entrepreneurs' cohorts and characteristics from the Labour Force Survey data. By doing so, the article aims to answer the following research questions: What is the current state of entrepreneurial economic activity in Turkey? Who are the self-employed Turkish people?

The topic is important for a number of reasons: On the one hand, with a growing population of around 83.6 million people (Turkish Statistical Institute, 2021a), Turkey is one of the largest countries connecting Europe and Asia, and with a dynamic economy, it is considered to be one of the next eleven countries expected to be the biggest economies in the world. Nevertheless, it is a country in transition, one that is considered stable and sustaining its competitiveness largely due to information and communication technologies adoption, infrastructure measures and its dynamic labour market in addition to an improved human capital base (Schwab, 2019). On the other hand, the case of Turkey as a dynamic nation of transition gives a significant potential to understand the entrepreneurship-development nexus that goes beyond the cases of established Western economies. Also from a cross-national comparison perspective, one can identify entrepreneurial economic activities in Turkey as an important case of comparison due to the country's significant economic position and potential.

In what follows, the author will first discuss previous literature on entrepreneurship and self-employment, especially regarding the Turkish context. Next, the author will present the research methodology. The results will be presented and discussed, which is followed by a conclusion and perspectives for further research.

## LITERATURE REVIEW

Recent literature on entrepreneurship explicitly analysed the role of environmental conditions on entrepreneurial economic activity. To be more specific, literature emphasized that differences in environmental conditions that shape entrepreneurial ecosystems can differ, and based on these differences, one can notice different paths of evolution towards an entrepreneurially driven economic structure (Guerrero *et al.*, 2020). Recent literature also highlights that entrepreneurship not only has a significant impact on economic development, but also the type of it has different consequences for different stages of competitive advantage. To be more specific, (Stoica *et al.*, 2020) identify that opportunity-driven entrepreneurship has a bigger impact on economic development of transition countries,

whereas necessity-driven entrepreneurship has a bigger impact on economic development of innovation-driven countries. Furthermore, recent empirical evidence suggests that the role of human capital in the transition towards a resilient, sustainable, entrepreneurially-driven economy gained importance in the last decade (Sharma, Shah, *et al.*, 2021; Sharma, Thomas, *et al.*, 2021; Sharma, Tiwari, Jain, *et al.*, 2021; Sharma, Tiwari, Talan, *et al.*, 2021).

These recent contributions imply that entrepreneurship is in fact very contextual, not only in terms of the discovery of subjective knowledge as a point of departure for market shaping activities (Erkut, 2016) or a resilience-oriented organisational transformation (Zutshi *et al.*, 2021), but also in terms of the conditions of entrepreneurial economic activity across different nations. In order to understand different national contexts in terms of their entrepreneurial conditions and current state, more empirical work is needed to motivate entrepreneurship policies that can stimulate entrepreneurial activity at the national level (Solomon *et al.*, 2021). When focusing on capturing the trends and current state of national economic activity, with a particular emphasis to entrepreneurship, it is essential to focus on the dynamics of the labour market for understanding different forms of self-employment, and distinguish between own-account workers and job creators to understand the latter's evolution, as job creators are the ones which contribute more to employment and economic development (Baluku *et al.*, 2021).

Since entrepreneurship-economic development nexus primarily relies on empirical evidence from developed nations (Stoica *et al.*, 2020), (Davidsson, 2015) suggests to gather empirical evidence from countries that have not been the subject of entrepreneurship research, which is followed by (Dvouletý, 2019) with the case of Czech Republic. Another such case is Turkey. Previous studies highlighted different aspects of Turkish entrepreneurship, although -to the knowledge of the authors- there is no systematic review of literature to understand tendencies and biases in current research on this topic. Some of the recent literature reviews can be identified, even though these are only partially covering the current state of entrepreneurship research in Turkey. A recent overview of postgraduate theses written in Turkey highlights that postgraduate theses of education faculties are biased towards understanding the entrepreneurial intentions of teachers and students in Turkey (Akyar & Sarıkaya, 2020). Similarly, (Gözüm, 2019) focused on scientific articles about entrepreneurship published in national scientific journals in Turkey. The author identified that the topic of entrepreneurial tendencies is the leading topic among Turkish researchers publishing in national scientific journals. A similar tendency can be seen in articles available via Web of Science in the last two years, as many scholars are engaging in measuring entrepreneurial tendencies (Gürel *et al.*, 2021; Özcan *et al.*, 2021; Yalçıntaş *et al.*, 2021), understanding the impact of Syrian refugee entrepreneurs on Turkish economy (Baktır & Watson, 2021; Chang, 2021; Kachkar, 2019) and how women entrepreneurs are changing the entrepreneurship scene in Turkey (Ármane *et al.*, 2021; Bozoğlu Batı & Armutlulu, 2020; Erdoğan, 2020; Kurteğe Sefer, 2020).

(Öner & Kunday, 2016) notice that entrepreneurship support started to increase and become more visible since 2006. According to the authors, the contextual framework of entrepreneurship, consisting of government policies, socioeconomic conditions, financial support, and skills (both entrepreneurial and business-related) seem to favour the growth of an entrepreneurial ecosystem in Turkey. The approach by (Birelma, 2019) explores working-class entrepreneurialism in Turkey. The author identifies that among manual workers, wage work is considered as working for a stranger. The author interprets this as a sign of non-identification with wage work, especially when self-employment is a serious option and even a desire to be realized.

(Oğuztimur & Seçkin, 2018) evaluate the provinces of Turkey regarding their entrepreneurial potential regarding economic factors, human capital, physical infrastructure, and innovativeness. The authors identify an unbalanced regional potential regarding the development of entrepreneurial economic activity, where developed provinces show a higher entrepreneurial capacity than developing ones. The authors notice that the unbalanced regional development perspective is almost identically reflected in the unbalanced entrepreneurial potential of Turkey.

Even though these articles provide valuable insights into specific fields of entrepreneurship, an overview of current entrepreneurial activity and self-employment in Turkish economy is missing in the current literature. This is the research gap identified by the authors, as many scholars are focusing on who has the potential to become an entrepreneur (entrepreneurial tendencies), what specific and disadvantaged

groups of entrepreneurs are currently doing in Turkey (women and refugees), but little has been done to understand the current entrepreneurial economic activities in Turkey from national statistics.

### RESEARCH METHODOLOGY

The approach follows the empirical strategy set by (Dvouletý, 2019) to use data from representative population surveys, to be more specific, the Global Entrepreneurship Monitor and the Labour Force Survey by operationalising the level of entrepreneurial activity by means of focusing on self-employment as a share of the economically active population between 15 and 64 years of the corresponding country. Hence, the research approach is a quantitative design focusing on the level of entrepreneurial activity available in statistics. This research will give an overview of recent statistical evidence covering the period of 2006-2020.

The statistical base of the quantitative design is taken from both Labour Force Statistics and the Global Entrepreneurship Monitor. Variables used for calculations are, first, the active total population, the number of self-employed persons, and the breakdown of the number of self-employed persons by means of gender, age, and education. These are taken from Eurostat (Eurostat, 2021a, 2021b, 2021c). In addition, the level of entrepreneurial activity is taken from the Global Entrepreneurship Monitor (Global Entrepreneurship Monitor, 2021a).

With the rate of self-employment, the authors indicate the share of self-employed persons among the active population between 15 and 64 years. With the rate of job creators, the authors indicate the share of self-employed with further employees among the active population between 15 and 64 years. With the rate of own account workers, the authors indicate the share of self-employed without any further employees among the active population between 15 and 64 years.

For calculating the association between the type of self-employment and gender, age, and education level respectively, the chi-square test of association will be utilized with the help of the statistical software package SPSS.

### RESULTS AND DISCUSSION

According to the Turkish Statistical Institute (Turkish Statistical Institute, 2020), small and medium enterprises consisted of 99.8% of all enterprises in Turkey, accounting for 72.4% of employment, 50.4% of revenue and 44% of value added in 2019. In addition, the same source reveals that Turkish small and medium enterprises realized 36.6% of overall Turkish exports and contributed to research and development spending of Turkish firms by 31%. These recent statistics suggest that the Turkish economy is still very dependent on small and medium enterprises. This dependence on small and medium enterprises is historically rooted in the national economic dynamics by means of organizing small and medium entrepreneurs in entrepreneurial organizations called Ahi Institution (Aktürk, 2021). As (Aktürk, 2021) mentions, a nation's economic history is primarily its history of entrepreneurship, and historically, the Turkish economy developed with the efforts of small and medium enterprises, organized by means of Ahi Institutions.

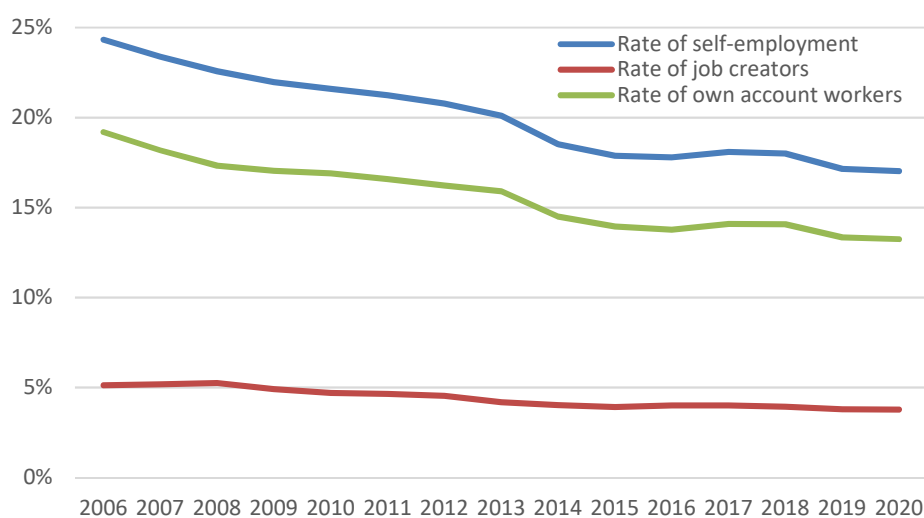
Based on the detailed analysis of (Aktürk, 2021), one can notice the historical trend of an economy characterized by a dominating small and medium enterprise sector. With respect to the current situation of Turkish economy, one can only identify limited information about the long-term development of entrepreneurial economic activities in Turkey. For instance, separate entrepreneurship statistics have been introduced by the Turkish Statistical Institute only recently.

Starting with the Global Entrepreneurship Monitor results, the most recent data available from Turkey is for the year 2018 (Global Entrepreneurship Monitor, 2021b). In 2018, the Total Entrepreneurial Activity (TEA) index for Turkey was 14.2% in 2018, a very sharp increase in comparison to 2006, in which the TEA index for Turkey was 6.1%. Similarly, the results revealed that 8.7% of the adult Turkish population was found out to be the owner-managers of new businesses in 2018 – which was a slight decrease in comparison to 2006, in which this rate was 11.4%. However, regarding the established business ownership results, one also notices a fluctuation over the years. In addition,

perceived opportunities for entrepreneurship increased from 33.9% in 2006 to 44.3% in 2018. Even though these numbers suggest an overall increasing trend, more recent data from the Global Entrepreneurship Monitor on Turkey is not available.

Hence, in what follows, the focus of the author would be on the Labour Force Survey, made available by Eurostat (Eurostat, 2021a, 2021b, 2021c), to understand the long-term development of entrepreneurial activity in Turkey. By focusing on the economically active Turkish population between 15 and 64 years of age, and self-employment engagement (both variables in 1000), the author calculated time series of self-employment rates (in %) in Turkey over the period of 2006-2020. By following the period starting from 2006, one can identify how entrepreneurial economic activity in Turkey evolved under the rule of the Justice and Development Party, which won its first election in 2002 and focused on restructuring the disastrous economy in the first four years of its governmental activity. Similar to the research strategy set by (Dvouletý, 2019), the author aims to distinguish between entrepreneurs with and without employees, i.e. job creators and own account workers. According to (Dvouletý, 2019) (p. 4) distinguishing between these two are important “especially from the perspective of policy makers, as job creators contribute mainly to economic growth”.

Figure 1 depicts the results of the calculations of the previously explained rates; (1) the rate of self-employed, (2) the rate of job creators, and (3) the rate of own account workers.



**Figure 1. Entrepreneurial Activity in Turkey between 2006 and 2020**  
(entrepreneurial activity as a % of Turkish population aged 15-64)

Source: own elaboration based on Eurostat (Eurostat, 2021a, 2021b, 2021c) data.

From Figure 1, one can identify that the rate of self-employed was 24% in 2006, and it dropped to 17% in 2020. Nevertheless, this is a stable and gradual drop, as the rate is nearly constant around 17-18% since 2015. This rate is above the EU-27 average of 12,4% in 2020.

In addition, we can identify that the entrepreneurial economic activity is dominated by own account workers. These were 19% of the active Turkish population in 2006, and maintained their dominance until 2020, corresponding to 13% of the active Turkish population. Own account workers are also the ones whose numbers are fluctuating more than those of the job creators. However, their representation in the active Turkish population is above the EU-27 average of 8,7% in 2020. In comparison to own account workers, the rate of job creators did not change much over the years. Whereas it was around 5% from 2006 to 2013, it slightly dropped to 4% in 2014 and remained there since then. This indicates that there is a small but stable group of job creating entrepreneurs despite all the negative events occurred since 2006 – the global financial crisis in 2008/2009, the unsuccessful coup attempt by the Gülenist terror group (FETÖ) in 2016 and the global pandemics in 2019/2020 did not change the stable position of this group much. In comparison, the EU-27 average was 3,7%

in 2020, which indicates that Turkey's rate of job creating entrepreneurs is above the EU-27 average despite all the negative incidents that occurred in the last decade.

In what follows, a demographic exploration of the data regarding gender, age, and education will be presented using data available via Eurostat (Eurostat, 2021c, 2021a, 2021b). Even though restricting the economic activity of self-employed to properties such as gender, age, and education does not mean that these are the only relevant properties of entrepreneurs, these are nevertheless significant criteria when it comes to understanding the cohorts of Turkish entrepreneurs. The empirical strategy set by (Dvouletý, 2019) also focuses on understanding entrepreneurs by means of these three properties, but for the case of Turkey, the choice of these three properties can be justified by a number of reasons:

Regarding gender, it has already been emphasized in the literature review that the number of scientific publications on the topic of women entrepreneurship is keeping on growing (Ármane *et al.*, 2021; Bozoğlu Batı & Armutlulu, 2020; Erdoğan, 2020; Kurteğe Sefer, 2020), hence, it is worth analysing how gender and type of self-employment are associated. Regarding age group, a recent statistical analysis by the Turkish Statistical Institute (Turkish Statistical Institute, 2021b) highlights that Turkey has the youngest population in Europe, with the age group 15-24 accounting for 15,4% of the Turkish population. As already mentioned in the literature review, a growing number of scholars are focusing on the entrepreneurial tendencies of students with the aim of contributing to the agenda on increasing the number of young entrepreneurs tendencies (Gürel *et al.*, 2021; Özcan *et al.*, 2021; Yalçıntaş *et al.*, 2021), hence, utilizing the potential of the youngest population in Europe. Therefore, it would be of utmost importance to understand how Turkish youth is contributing to the entrepreneurial economic activities of the nation, implying a questioning of the association between age and type of self-employment. On the other hand, previous literature also emphasized the significant role of basic education on entrepreneurial economic activities in Turkey (Çetindamar *et al.*, 2012). Together with the observations of (Schwab, 2019) in the Global Competitiveness Report 2019, stating the importance of human capital development in understanding how Turkey is keeping its competitive position in the global economy, this result indicates that education and type of self-employment should also be analysed for detecting a possible association.

Tables 1, 2, and 3 show the results of the chi-square tests of association as well as Cramer's V for the average values of the period 2006-2020 for Turkey. In all three cases, data available from Eurostat (Eurostat, 2021a, 2021b, 2021c) has been utilized with the help of the statistical software package SPSS.

Table 1 shows us that there are roughly 5,6 times more self-employed males in comparison to females, which partially explains why there is a growing interest in academic scholars to concentrate on women entrepreneurship in Turkey. In case of job creators, 23,80% of males employ at least one further person, whereas only 11,77% of females employ at least one further person, indicating a further imbalance.

Table 2 shows us that those aged between 25 and 49 are the leading group among self-employed, with a share of 65,37%. They are followed by those aged between 50 and 64, with a share of 31,54%. In comparison to these groups, the youngest group of Turkish people aged between 15 and 24 constitute only 3,09% of total self-employed persons among the active Turkish population. Among the job creators, the lion's share is of those aged between 25 and 49 with 75,67%, whereas only 2,45% of those aged between 15 and 24 are employing at least one further person.

Table 3 shows us that a vast majority of self-employed persons in Turkey has primary education or less (73,78%). Half of the job creators belong to this group, whereas the other half is almost equally split between those who has upper secondary or post-secondary education and those who has tertiary education. In case of solo self-employed persons, this picture changes with those having primary education or less dominating the scene with 80,46%.

The results of this study indicate that there are imbalances in terms of gender, age, and education in case of self-employment. Self-employed Turkish people are mainly males, aged between 25-49, and have primary education or less. Own account workers largely dominate the scene, but their numbers are fluctuating more than the stable, but the small group of job creators.

**Table 1. Chi-square association test for gender and type of self-employment (age range 15-64, in 1000, percentages given in parentheses)**

Gender / Type of Self-Employment	Solo Self-Employed	Job Creators	Total Self Employed
Females	707.03(88,23%)	94.3(11,77%)	801.33 (100%)
Males	3459.2(76,20%)	1080.3 (23,80%)	4539.5 (100%)
Total Self-Employed	4166.23 (78%)	1174.6 (22%)	5340.83 (100%)

Test of Association, Chi-Square=57,720, p-value=0,000, Cramer's V=0,104

Source: own calculations in SPSS.

**Table 2. Chi-square association test for age and type of employment (age range 15-64, in 1000, percentages given in parentheses)**

Age category / Type of Self-Employment	Solo Self-Employed	Job Creators	Total Self Employed
15-24	136.31 (3,272%)	28.73 (2,45%)	165.04 (3,09%)
25-49	2602.28 (62,45%)	888.85 (75,67%)	3491.13 (65,37%)
50-64	1427.67 (34,278%)	257.02 (21,88%)	1684.69 (31,54%)
Total Self-Employed	4166.26 (100%)	1174.6 (100%)	5340.86 (100%)

Test of Association, Chi-Square=71,025, p-value=0,000, Cramer's V=0,115

Source: own calculations in SPSS.

**Table 3. Chi-square association test for education and type of self-employment (age range 15-64, in 1000, percentages given in parentheses)**

Level of Education / Type of Self-Employment	Solo Self-Employed	Job Creators	Total Self Employed
Less than Primary and primary (ISCED 2011 0-2)	3352.38 (80,46%)	587.94 (50,05%)	3940.32 (73,78%)
Upper Secondary and post-secondary	583.33 (14%)	308.43 (26,26%)	891.76 (16,70%)
non-tertiary (ISCED 2011 3-4)	230.55 (5,54%)	278.31 (23,69%)	508.86 (9,52%)
Tertiary (ISCED 2011 5-8)	4166.26 (100%)	1174.68 (100%)	5340.94 (100%)

Test of Association, Chi-Square=512,793, p-value=0,000, Cramer's V=0,310

Source: own calculations in SPSS.

## CONCLUSIONS

By conducting this study, the authors aimed to address two research gaps present in the literature. From a national perspective, a big number of studies elaborating entrepreneurship in Turkey restricted themselves to entrepreneurial intentions of students, women entrepreneurship or entrepreneurial activities captured only by GEM data. This indicated that previous contributions were biased towards certain topics, but so far little has been done to capture real entrepreneurial economic activities in Turkey, especially in the sense of national statistics. Therefore, the article contributes to the ongoing debate around Turkish entrepreneurship by providing an up-to-date statistical overview of current entrepreneurial activities and self-employment, highlighting that this kind of overview is still missing for the Turkish case.

From the international perspective, the article contributes to the empirical agenda of capturing national levels of self-employment and entrepreneurship, allowing for a cross-national comparison. By combining different data sources, the study goes beyond the mere notion of capturing entrepreneurial intentions to allow for an overview of understanding what is currently happening in terms of entrepreneurial activity. The study, based on the empirical strategy set by (Dvouletý, 2019), calls for further contributions from different national perspectives to allow for a cross-national comparison of levels of entrepreneurial activity. In addition, the study follows the distinction made in (Dvouletý & Orel, 2020) regarding self-employed individuals with and without further employees to follow their development path separately.

The results indicated that even though the level of entrepreneurial activity dropped from 24% in 2006 to 17% in 2020, this was still above the EU-27 average and largely due to a decline in the number of own account workers. On the other hand, job creators – self-employed persons with at least one further employee – remained to be in a stable 4%-5% level throughout the period of observation. The stability of this group is more important for economic development than own account workers due to their impact

on creating additional employment. The results also revealed a gender imbalance, and different structures of age and education composition in case of own account workers and job creators.

The results imply that despite the negative events occurred in Turkey in the recent past, the group of job creators remained to be stable over the last 15 years, whereas fluctuations were mainly seen among own account workers. For policymaking purposes, the authors state that both phenomena need to be elaborated in detail, since the stability of job creators can be further enhanced to increase their number and therefore increase the employment rate, whereas any measures to lessen the fluctuations among own account workers can also work in favour of the economic situation. To increase the number of women entrepreneurs, a lot has been done in Turkey in the last 18 years. Nevertheless, a lot is still there to achieve. One possible strategy would be to have a close look at the job creator women to understand their aspirations, behaviour, and survival strategies, since improving institutional conditions only makes one part of the big picture, and regarding the role of women in the society, more measures should be taken to ensure a work-life balance and a balance between family and business for encouraging more women to make a career as an entrepreneur. Finally, the study also calls for policymaking to increase the number of self-employed among those between 15 and 24. Turkey, having the youngest population in Europe, has a big potential for youth entrepreneurship, and more efforts can be done to achieve a higher rate of self-employed within this age group.

Like any other scientific study, this article is not free of limitations. On the one hand, the study restricted itself to the data available from GEM and LSF and highlighted only national levels of entrepreneurship and self-employment. Future research can give more emphasis to regional imbalances in terms of entrepreneurial activity in Turkey. From previous research, it is known that developed provinces in Turkey have better conditions for entrepreneurial activity than developing ones. By focusing on these regional imbalances, further studies can elaborate what can be done for the catch-up process of developing provinces in terms of creating the conditions for entrepreneurial activity. On the other hand, in terms of the characteristics of self-employed, the study only focused on gender, age group and education level, whereas previous research highlights further characteristics that can as well be relevant for policy purposes. Therefore, further research can elaborate other characteristics of self-employed to shed light to current entrepreneurial economic activity.

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# Factors affecting the choice of Incoterms: The case of companies operating in Poland

Agnieszka Hajdukiewicz, Bożena Pera

## ABSTRACT

**Objective:** The main objective of this paper is to identify and examine the main factors which affect the choice of Incoterms® rules that are used in international sales contracts by enterprises operating in Poland.

**Research Design & Methods:** Mixed methods research was conducted to achieve this goal. The methods applied include the critical review of existing literature on Incoterms® and their use in international sales contracts and a survey carried out among export/import managers of companies operating in Poland.

**Findings:** Results of this study proved that there are many external and internal factors to consider in the Incoterms® selection process, which can affect cost, risks, liabilities and formalities of international transactions. The main problem faced by many companies is making incorrect or decisions on Incoterms®, as traders often underestimate their potential, misuse or apply certain terms too much, choosing them without much reflection and continuing to use the same Incoterms® even if other conditions of transactions differ significantly. The fact that most of companies don't consider domestic and foreign competition as a factor strongly affecting their decisions on Incoterms® may suggest that the use of Incoterms® as a strategic tool for building competitive advantage is often underestimated. Also, many traders seem to be mainly focused on cost of transportation but do not see the link between Incoterms® and terms of payment or other financial aspects of transaction. The results revealed also that the selection of Incoterms® is often considered as a difficult task because of the insufficient knowledge on the topic and that entrepreneurs point out the need for further training that would increase their knowledge and skills in the proper use of Incoterms®.

**Implications & Recommendations:** The obtained results can be used both by entrepreneurs making decisions about Incoterms®, who need guidance on their correct application. They also give indications for the education sector on how to better respond to the need for expanding knowledge and skills about Incoterms®, especially with respect to Incoterms® selection and its determinants, by shaping its educational offer appropriately.

**Contribution & Value Added:** The research provides deeper understanding and fills the gap in knowledge regarding Incoterms® and their appropriate use in international trade. It considers different factors affecting decisions on selection of Incoterms® made by companies operating in Poland.

**Article type:** research article

**Keywords:** Incoterms; delivery terms; trade terms; sales and purchase contract; trade facilitation

**JEL codes:** F23, K12, M16

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## INTRODUCTION

One of the main clauses in international contracts of sale is the trade term. To prevent problems arising from different interpretations of trade terms in various countries, industries and sectors, it is recommended that all sales contracts should include reference to the International Commercial Terms (Incoterms®), which are a set of the globally-accepted commercial terms issued by the International Chamber of Commerce (ICC). They provide harmonized rules for the interpretation of the most fre-

quently used terms for the delivery of product in international sales transactions. Nowadays Incoterms® are usually incorporated in international business contracts but it is crucial that traders apply a trade term that is proper for their business transaction. There are many factors to consider in the Incoterms® selection process, which can affect cost, risks, obligations and formalities of international transactions. In practice, many companies, particularly SME's, encounter difficulties in the correct application of Incoterms® and make wrong decision regarding Incoterms®. They underestimate their potential, misuse or apply certain terms too much. This may negatively affect the profitability of the transaction and in some cases even cause serious losses for a company.

The selection of Incoterms® is often considered as a difficult task because of the insufficient knowledge in this field. Additionally, old trading practices do not fully match modern transport requirements, increasing risks for traders and creating even bigger challenges for the correct application of Incoterms®. This study endeavors to increase the knowledge and understanding of the topic that in our opinion has a great importance for business, because properly used Incoterms® 2020 can be an effective management tool. We also found out with surprise that the number of the scientific publications on this subject is limited and the significance of Incoterms® is often underestimated not only among business practitioners but also among researchers.

The main aim of this paper is to identify and examine the main factors which affect the choice of Incoterms® rules that are used in international sales contracts by enterprises operating in Poland.

By an in-depth literature review and a survey conducted among companies involved in foreign trade, the main selection criteria that might be applied to choose the right Incoterm rule are identified and discussed.

The structure of this paper is as follows: first, a literature review gives an overview of Incoterms® 2020 and issues related to their application in international contracts of sale and is followed by an identification of potential selection criteria. Then, the analysis of various aspects of decision making on Incoterms® 2020, including the actual choice criteria, in sample companies is conducted, followed by the discussion on the effective use of Incoterms® in international sales contracts and the formulation of some recommendation for decision-makers based on conclusions of the research.

## LITERATURE REVIEW

### Overview of INCOTERMS® 2020

The International Commercial Terms (Incoterms®) are a set of internationally accepted definitions and rules of interpretation for most common commercial terms used in contracts for the sale of goods (ICC, 2019). Incoterms® specify in detail the rights, duties, obligations and responsibilities of sellers and buyers in the fulfillment of their contractual obligations, in relation to the delivery of goods and the delivery-related services such as e.g. customs clearance and transport movements (Bergami, 2013).

Incoterms® are issued by the International Chamber of Commerce (ICC), which proposed the first set of uniform interpretation rules of trade terms in 1936 to address the problem of different interpretations of trade terms in different countries and branches of industry and thus provide greater certainty regarding the actual content of the contract of sale. Nowadays, the Incoterms® are used worldwide and have become the international standard for the interpretation of the most frequently terms in foreign trade (Davis & Vogt, 2021; ICC, 2021; Malfliet, 2011).

Approved worldwide by governments, legal authorities, and business professionals, the use of Incoterms® is however not obligatory. As the ICC is not a governmental organization, it cannot make laws, however, it can recommend solutions and make rules that traders may follow on a voluntary basis, through incorporation of the these rules into contracts of sale (Bergami, 2013). Thus, Incoterms® are a tool offered to companies which can choose to apply them or not. Still, the decision not to use Incoterms® in a contract can cause significant difficulties when determining the customs value of goods, making them quasi-compulsory in some countries (Hien *et al.*, 2009).

Incoterms® clearly define the tasks, costs and risks involved in the delivery of goods as a part of purchase and sales transactions (ITA, 2021). Incoterms® address three important questions: 1) Which delivery tasks will be performed by the importer and exporter (e.g. who organizes carriage or insurance of the

goods or who obtains shipping documents and export or import licenses)?; 2) How will delivery costs be distributed between the buyer and seller?; and: 3) When does the risk pass from seller to the buyer under each of these rules? (Debattista, 2020; Yaakub *et al.*, 2018). Incoterms<sup>®</sup>, therefore, precisely define several elements: the seller's and buyer's delivery obligations, the risk transfer between contract parties, the distribution of costs between the seller and the buyer, and the responsibility for obtaining the transportation documents (Chevalier, 2000). In a codified form (three-letter trade terms) they convey a lot of information regarding how the contract parties are going to allocate certain risks and responsibilities between them, reflecting business practice in contracts for the sale and purchase of goods.

Since the trade terms must harmonize with the emerging new business patterns and need to be adapted to the changing commercial and logistical practices, the ICC issued revised versions of Incoterms<sup>®</sup>. The modernized sets of rules were published in the years: 1953, 1967, 1976, 1980, 1990, 2000, 2010 and 2020. The Incoterms<sup>®</sup> 2010 introduced two new rules (DAT and DAP), and eliminated four previously used terms (DEQ, DES, DDU and DAF). Incoterms<sup>®</sup> 2020 replaced DAT by DPU (Delivered at Place Unloaded). The latter change was made to eliminate the word "terminal" and thus avoid the confusion of assuming (wrongly) that when the DAT clause is used, the place of destination of delivered goods must be a terminal understood as a "terminal building" (Piltz, 2020).

Incoterms<sup>®</sup> 2020 are a set of 11 rules, divided into two groups: universal trade terms, that apply to multiple modes of transport (including land, air and waterway transportation), and single-modal trade terms, that are exclusively designed for sea and inland waterway transportation (Wood & Aversa, 2019; Piltz, 2020). Through this classification, already introduced in an earlier version of Incoterms<sup>®</sup>, the ICC wished to prevent the "maritime" terms specifically designed for transport by waterway – from being used when the universal, multimodal terms would be more suitable (Malfliet, 2011; Piltz, 2020). The waterway Incoterms<sup>®</sup> rules presuppose that both the place of delivery and the place of destination are at a port and should not be used if the selling party delivers containerized goods (Piltz, 2020).

Multi-modal, universal Incoterms<sup>®</sup> that can be applied in contracts involving delivery by various means of transport include seven terms: EXW (Ex Works); FCA (Free Carrier); CPT (Carriage Paid To); CIP (Carriage and Insurance Paid to); DAP (Delivered At Place); DPU (Delivered Place Unloaded); DDP (Delivered Duty Paid). Single-modal Incoterms<sup>®</sup> that are intended for sea and inland waterway transportation only, comprise four terms: FAS (Free Alongside Ship); FOB (Free On Board); CFR (Cost and Freight); CIF (Cost, Insurance and Freight).

In previous versions of Incoterms<sup>®</sup> (1990, 2000), the terms were presented according to the balance of obligations between the parties of the contract and divided into four groups (E, F, C, D) (Shiphub, 2020). The duties of the seller related to the delivery increase progressively from the E, F, C to the D group, while the responsibility of the buyer diminishes accordingly. Many authors still prefer this "traditional" classification as it is still suitable from an educational point of view, taking into account methodological-dogmatic identification criteria (Malfliet, 2011; Piltz, 2020).

In this approach four groups of trade terms can be distinguished:

– E group: contains only one rule (EXW – Ex Works) obliging the seller to place the goods at the disposal of the buyer at the seller's premises, on the agreed date or within the agreed period of time. EXW requires that the seller makes the goods available for collection by the buyer at a certain place (and notifies the buyer of the collection date/period), packed and marked, but not loaded. The transport of the goods as well as customs clearance formalities are the responsibility of the buyer.

– F group: the F- terms (FCA – Free Carrier, FAS – Free Alongside Ship, FOB – Free On Board) impose on the buyer the obligation for bearing the cost and risk of the main international carriage. However, the seller is obliged to deliver the goods to the carrier chosen by the buyer at a certain place of delivery and to clear them for export at his own expense. Depending on the delivery location in the F-term used, the seller may also be obliged to load the goods on the means of transport. The buyer must organize and pay for the further transport (bearing the risk of the main carriage) and import clearance into the country of destination.

– C group: contains four terms (CFR – Cost and Freight; CIF – Cost Insurance and Freight, CPT – Carriage Paid To and CIP – Carriage and Insurance Paid To), according to which the seller pays for the main international carriage, but does not bear the risks thereof. Risks pass to the buyer as soon as the goods

are handed over to the carrier at the place of delivery. In contrast to the other groups of Incoterms®, in the case of applying the C-terms the place of delivery and transfer of risks is not the same as the place of taking over the goods and transfer of costs from the seller to the buyer (so-called two-point clauses).

– D group: as a typical characteristic of all terms of the D group (DAP – Delivered at Place, DPU – Delivered at Place Unloaded and DDP – Delivered Duty Paid), the seller bears all costs and risks related to the delivery of goods up to the indicated delivery point in the country of destination, where the buyer is obliged to take over the goods. However, the buyer remains responsible for clearing the goods for import except for the DDP clause according to which the seller must complete all the formalities related to the clearance of imported products.

According to ICC/Paris findings, the Incoterms® clauses are used in 90% of all international sales contracts and became a widespread international standard (Piltz, 2020). They influence various business aspects from sourcing to sales, from legal to finance, from business operations to corporate strategy. However, despite the fact that many enterprises already interact closely with Incoterms® rules in their day-to-day business, their power is often underestimated (Deloitte, 2020). Therefore, it is very important to broaden the knowledge on the content and proper use of Incoterms®. Incoterms® should not be taken as an obligation but as an opportunity to improve the efficiency of an international deal (Hien *et al.*, 2009; Huuhka, 2019).

### **Selection of the appropriate trade term**

With the progressing globalization and internationalization of the world economy in recent decades, the number of negotiated contracts has increased significantly, and at the same time they have become more complex and diverse. Therefore, specifying delivery terms in accordance with Incoterms® is crucial since they add clarity and understanding between the parties to the agreement, representing often different cultures, religions, languages and so on. Parties must have an understanding of how different Incoterms® are used, as well as how to choose the appropriate term. Misused Incoterms® can have negative effect on payment, delivery schedules and generate extra costs; they may result in weak inventory control or a bad customer experience (Huuhka, 2019).

Risk, cost, country of destination, time, product and payment conditions influence the Incoterms® rule choice, which respectively, have a huge impact on international trade. Incoterms® must be selected by taking into careful consideration various affecting variables. Properly used Incoterms® are cost effective and lead to the improvement of the company's financial indicators (Gardner, 2012; Huuhka, 2019).

Several factors have to be considered in order to ensure a company uses the right Incoterms® rules to maximize efficiency. According to Malfliet (2011) they include:

- the nature of the goods: transported in containers, manufactured goods, bulk goods, etc.;
- the means of transport: maritime, non-maritime, multimodal;
- the terms of payment and the documentary requirements corresponding to these terms;
- the ability and the efficiency of the seller or the buyer to carry out the obligations related to the delivery of the contracted goods.

The author argues that EXW is not in line with international trade practice. Contract parties are recommended to choose FCA seller's premises instead. Also, in his opinion, the fact that FCA, CPT and CIP rules designate the point of delivery at the moment they are handed over to the carrier, and impose less demanding documentary obligations makes them suitable for multimodal and container transportation. Traders are recommended to use these terms instead of the maritime terms. The author also believes that SME exporters tending to choose EXW or F-terms may miss an important opportunity associated with organizing transport themselves and charging a commission to the buyer for the service rendered. The advantages of the seller organizing transport include among others: the possibility of consolidating shipments and thus reducing storage and transport costs and aligning the date of shipment with the production planning; choosing a reliable carrier, control over the quality of goods until they have reached the country of destination and collecting the documents necessary for payment under the letter of credit and other specific documents (Malfliet, 2011).

Hien *et al.* (2009) aimed to identify the main environmental factors taken into consideration when deciding which Incoterms® rules to use and to analyze the influence of the choice of trade terms on company export performance. Based on study by Duncan (1972) and their own review of the literature, the authors have prepared a list of the environmental factors, which contains 10 factors: international experience, shipment value, habits and practices of the organization, financial resources of the organization, chosen mode of transportation, client's characteristics, country risk, competitive intensity and regulations of the destination country. The findings highlight the significance of taking into consideration both the internal and external business environments in the selection process for Incoterms® and its contribution to improved export performance. The achieved results have proved that considering relevant environmental factors when selecting Incoterms® is a variable that is positively correlated to export performance, as it may reflect management's ability to understand the legal environment of the company. The authors believe that constituting one of the key issue in negotiating international sales contracts, the choice of Incoterms® appears to be also a fundamental factor contributing strongly to the company export success.

Suraraksa *et al.* (2020) identified four factors influencing the decision-making of Incoterms® of manufacturers in the automotive parts sector in Thailand. They include: operating costs, cooperation and bargaining power, knowledge and understanding and operation duration. They constitute the main choice criteria of Incoterms® which were then divided into fifteen sub-criteria. The findings indicated that "operating costs" were the first and most important criterion which the manufacturer considers when deciding which of the Incoterms® to choose. The result was consistent with the priority of the secondary criteria as three operating costs sub-criteria, which included "annual budget", "transportation expenses" and "value of products", were ranked the highest. "Knowledge and understanding", referring to the state of knowledge on international trade and Incoterms®, was ranked second. Four sub-criteria which have been assigned to this criterion include: "Incoterms® rules", "experience in choosing Incoterms®", "international trade laws" and "complicated documents". Relatively less significant was "cooperation and bargaining power", involving such sub-criteria as: "negotiation between the buyer and seller", "trust between the seller and buyer", "collaboration within the company", "agreed terms between the seller and buyer". "Operation duration" divided into four sub-criteria: "payment terms", "transportation period", "duration to change carriers", "duration for risk taking", ranked lowest among the criteria for consideration.

Among factors affecting the choice of Incoterms® Stojanović and Ivetić (2020) pay attention not only to distance between countries, but also to GDP per capita and national policy decisions. The Incoterms® rule is aimed at supporting transport and insurance sector in a domestic economy.

Unal and Metin (2021) examined the factors that influence Incoterms® selections with the purpose to identify potential differences in the way they affect exporters and importers. For this purpose, they analyzed the importance weights of each factor, using Fuzzy Analytical Hierarchy Process (FAHP), and ranked them for both two parties. The authors grouped the 13 sub-criteria under three main criteria validated by foreign trade experts which were used to conceptualize a model of the study. The main criteria and their assigned sub-criteria were as follows: 1) Resource-advantage criterion – including sub-criteria such as firm size, staff characteristics, relations with customers/suppliers, relations with forwarding agents; (2) Efficiency-cost criterion – involving sub-criteria such as mode of transportation, mode of payment, type of goods, cost of goods, cost of transportation; (3) Legitimacy environment criterion – covering the secondary criteria such as complexity of transportation, risks, customs/bureaucracy and distance.

Findings of the study revealed that the key factor influencing the selection of international commercial terms for both exporters and importers was "transportation costs" while the least important one was "firm size". Four factors which included: "relations with forwarding agents", "type of goods", "complexity of transportation" and "distance" influenced importers and exporters differently in their selection processes. Relations with forwarding agents and distance were found to be more influential for exporters while the type of goods and complexity of transportation had a bigger impact on importers. In general, cost related factors influenced the decisions on Incoterms® the most and except of a few factors, no significant divergence between the selection decisions of importers and exporters was found.



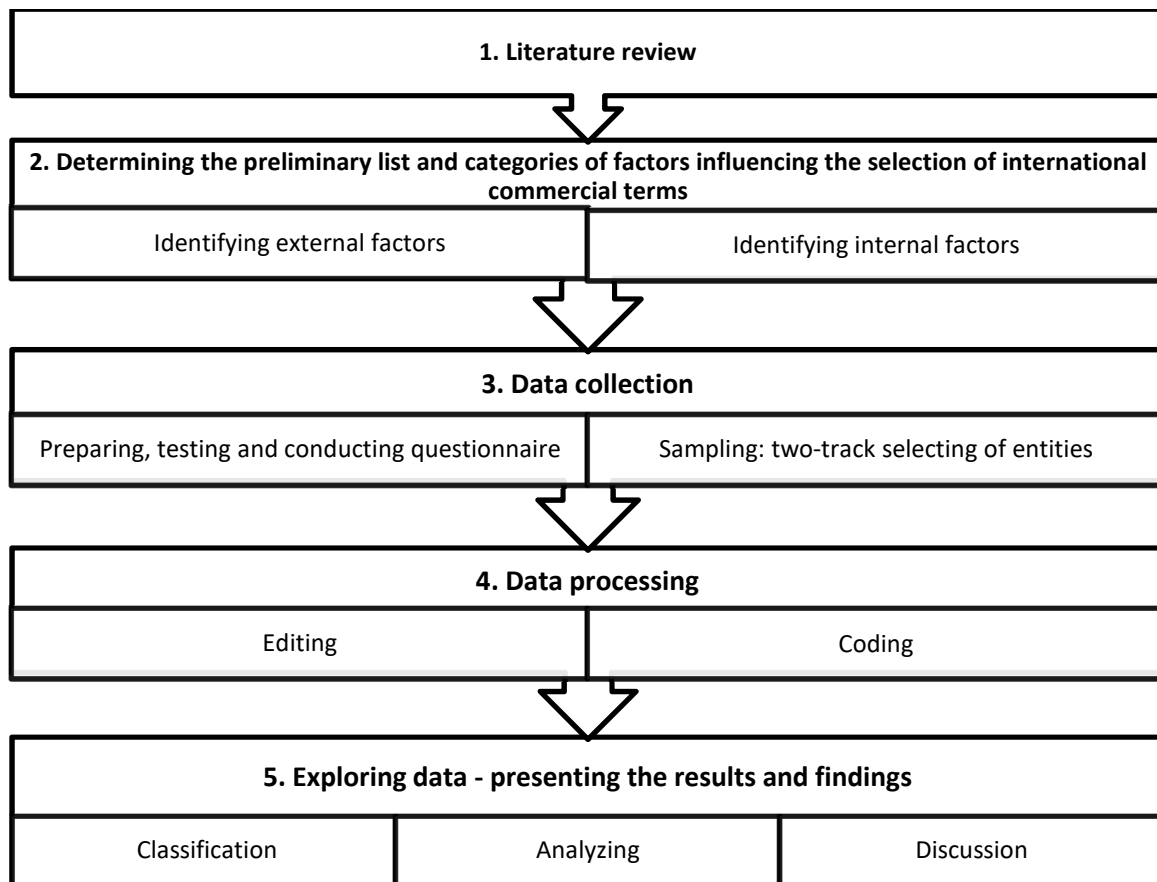
Deloitte (2020) in their report proposed an overall Incoterms® check-up an organization should perform to ensure that they use the right Incoterms® rules to maximize efficiency.

According to the authors, certain factors may have a positive impact on a company's value chain and should be considered in the decision-making process on Incoterms®. Among others, Incoterms® rules should be in line with their intention (for instance maritime terms should not be used for containerized, multimodal transportation); Incoterms® rules should be in accordance with a contract party's intended role in the export and the obligations arising from it. Additionally, using software a company must assure that software solutions are adjusted to properly reflect Incoterms® rules and support the requirements of their handling; the choice of Incoterms® should be in compliance with the purposes of accounting and invoicing; a company should implement or review the sales and procurement calculation schemes based on Incoterms®.

Our research is an attempt to further investigate this problem and fill the gap in knowledge regarding the right use of Incoterms®, focusing on decision making on trade terms in companies operating on the Polish market and involved in foreign trade.

### RESEARCH METHODOLOGY

The main objective of this study was to find out which factors affect the selection of particular terms in the international business contracts and to assess their relative significance. We implemented a mixed methods research to reach this goal. Specifically, the quantitative and qualitative data in this study were collected through a survey carried out among export/import managers of companies operating in Poland. The research process was divided into five phases commencing with the identification of the research objective (Figure 1).



**Figure 1. Research conceptualization**

Source: own elaboration.

First, we reviewed the relevant literature focusing on using Incoterms® in international trade operations and addressing the issues with regard to the selection of the appropriate rule. Secondly, considering the preliminary list of factors, selected on the basis of the literature review, we decided to examine two groups of factors potentially influencing the Incoterms® selection. The first group of factors includes “external factors”. It is made up of the factors of external business environment and independent of the organization that can affect the choice of commercial terms. While the second group of determinants – “internal factors” – refers to factors from internal business environment, i.e. factors within the company and under control of it, which can also impact the company selection of Incoterms®. In the third step we created an online questionnaire for the respondents to verify the factors that they take into account in making decisions regarding Incoterms® and to find out their priorities when considering delivery terms. We used the Google Forms platform to create an online questionnaire automatically hosted via a unique URL. The questionnaire was divided into five thematic sections. The characteristics of the firms was provided in some detail through the first set of questions. The European definition of enterprise was applied to determine the category of the entities. We used Statistical classification of economic activities in the European Community (NACE rev.2) to identify the categories for production of goods and services of the surveyed companies. Then, in the second part, the respondents were asked to indicate their preferences and practices related to the application of Incoterms® in company operations. The third part of questionnaire contains questions referring specifically to factors influencing their decision-making on Incoterms®. The next section explores methods and forms of enhancing knowledge and skills essential for the proper use of Incoterms®. The questions providing characteristics of survey respondents are included in the last part of our questionnaire. The questionnaire went through pilot testing on a small sample of 37 graduates from the Cracow University of Economics and was subsequently modified and then used to collect data.

We selected two methods of targeting appropriate participants who might be interested in taking part in our research on Incoterms®. The potential respondents were selected in 2 different ways. Firstly, we searched for the entities operating in the Polish market and involved in foreign trade. For this purpose we used Orbis computer database providing access to approximately 400 million entities worldwide. The stratified random sampling was applied according to the following criteria: active companies, operating in the Polish market, internationalized businesses (at least exporting and with or without share of foreign capital). We obtained the sample of 3,129 entities. Then, in order to select the companies operating in the market, we limited our sample size by introducing additional criterion of financial data availability. We considered the operating revenue (turnover) for 2019 at the latest. Finally, we selected 746 companies operating in the Polish market and trading with foreign partners and sent our questionnaire to their export and import managers. In order to increase the sample size we additionally sent an invitation to our students and graduates of International Economic Relations at the Cracow University of Economics asking them to pass the questionnaire to export/import managers in their companies or even take part in our survey (as experts and business practitioners). Postgraduates studying international trade were also asked to participate in the survey. A total of 695 emails were sent to this second group.

We used an e-mail survey and sent 1441 emails to our potential respondents. A total of 121 submissions of completed questionnaires were obtained. The reasons why the rest of our potential respondents were not included in the final sample were as follows:

- 9.6% (139) – refusal to take part in the survey;
- 24.8% (358) – wrong e-mail address (regarding mostly postgraduates – 70% of this category);
- 53.6% (823) – not responding to our e-mails.

A total of 121 complete questionnaires were gathered. The survey was conducted in September 2021.

The identified research sample is dominated by large and medium companies according to the European classification, which account for nearly 87% of the total study population. More than half of the companies were classified as dealing with manufacturing. In the survey sample there was also a relatively large representation of companies operating in wholesale and retail trade sector as well as

mining and quarrying and construction sector. Approximately 73% of the firms in the sample are internationally active (in exporting and importing), being at the same time involved in sales and purchases on the domestic market. Nearly half of the surveyed companies import only one type of product representing a specific degree of processing (raw materials, intermediate or final products). The remaining companies purchase at least two types of products abroad, with nearly one in four companies importing goods classified as each stage of manufacturing (Table 1).

**Table 1. Characteristics of the research sample**

Size of the company (in %)		Types of economic activities according to NACE rev.2 (in %)	
large	72.8	Agriculture, forestry and fishing	0.8
medium-sized	14.0	Mining and quarrying	14.9
small	6.6	Manufacturing	52.1
micro	6.6	Construction	9.9
		Wholesale and retail trade, repair of motor vehicles and motorcycles	17.4
		Accommodation and food service activities	0.0
		Financial and insurance activities	5.0
		Other activities	0.0
Types of company turnover (in %)		Export share in total sales revenues (in %)	
exports, imports, domestic sales and purchases	72.7	less than 10%	8.3
exports, domestic sales and purchases	5.0	from 10% to 30%	15.7
exports and imports	2.5	from 30% to 50%	25.6
imports	6.6	more than 50%	37.2
imports, domestic sales and purchases	3.3	we do not export	13.2
domestic sales and purchases	9.9		
Types of imported products (in %)			
raw materials	21.5		
raw material, intermediate products	5.0		
raw materials, intermediate products and final products	23.1		
raw materials and final products	1.7		
intermediate products	7.4		
intermediate products and final products	21.5		
final products	19.8		
we do not import	0.0		

Source: own study.

The research sample was also presented taking into account the respondents' position in the hierarchy of their organizations and the length of their working experience.

**Table 2. Basic information about the respondents**

Position (in %)		Work experience (in %)	
Assistant	14.9	Up to one year	9.9
Specialist	35.5	More than one and not more than five years	41.3
Junior manager	28.1	Between five and ten years	9.1
Senior manager	16.5	Over 10 years	39.7
President/Director	1.7		
Other	3.3		

Source: own study.

Respondents are mostly specialists and junior managers, so they are on middle and lower-middle – level positions in the hierarchy of their organizations. 16.5% are senior managers and 2.7% are top executives. It is interesting to note that about half of respondents have experience of less than 5 years,

out of them 41.3% possess experience of more than one and not more than five years, at the same time 39.7% have much longer work experience – over 10 years (Table 2).

The collected raw data were appropriately prepared, organized and converted into usable information in the next phase of our research. Then we took all collected qualitative data and assigned them to a set of meaningful and cohesive categories. Responses in the questionnaire were numbered. We selected numerical coding. We adopted a designation of 1 or more for the answer related to the research objective. The higher was the assigned value, the more the response was positively linked with the aim of the study.

In the last phase, we analyzed the collected quantitative data and coded qualitative data. In our research we tried to use elements of descriptive statistics. Through this analysis we attempted to explore the importance of external and internal factors affecting the use of Incoterms® in companies' business operations.

## RESULTS AND DISCUSSION

On the basis of the obtained results, it can be concluded that the most frequently used Incoterms® rule in export transactions was EXW, followed by DAP, CIF and FCA. These results show the variation between companies in this respect, which may reflect the fact that these companies operate in different industries with their specific needs as regards the delivery terms and their own commercial habits. However, EXW's dominance is quite surprising and not in line with other studies (Suraraksa *et al.*, 2020; Schaefer, 2017) that indicate FCA as the most popular Incoterms® rule. This can be explained in part by the fact that the sample has a large representation of big companies that have strong bargaining power towards small recipients and they tend to choose the terms which do not require taking on additional responsibilities and/or risks. But it may also mean overestimating EXW by exporters, and confirm the point of view presented by Malfliet (2011), that not all exporters understand the nuances of Incoterms®. In import transactions, most frequently chosen Incoterms® are: DAP, FOB and CIF. As in exports, this may result from the large share of large companies with high bargaining power and industry specificity. But the high proportion of marine terms may also indicate their excessive use (where perhaps it would be better to use universal formulas) and a lack of awareness of their weak points (Table 3).

**Table 3. Incoterms® most frequently used in international transactions (in %)**

In exports		In imports	
EXW	23.1	EXW	1.7
FCA	10.7	FCA	5.0
FOB	1.7	FOB	16.5
CIF	13.2	CIF	13.2
CPT	0.8	DAP	36.4
DAP	16.5	DDP	8.3
DPU	0.8	No import transactions/no using Incoterms®	19.0
DDP	3.3		
No export transactions/no using Incoterms®	29.8		

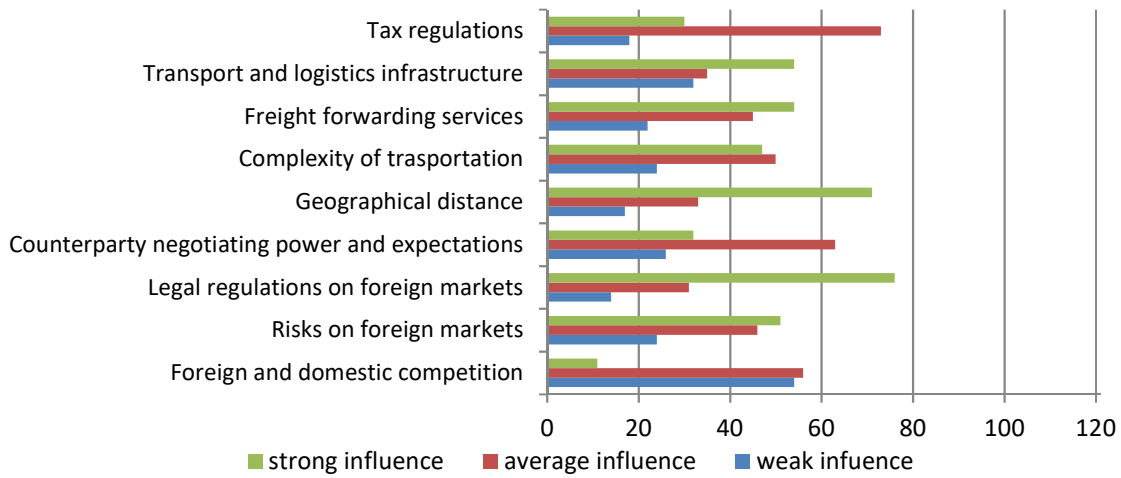
Source: own study.

According to the survey results, 80% of the companies were involved in export and import transactions and use Incoterms® to define delivery terms. About 10% of the surveyed companies did not export.

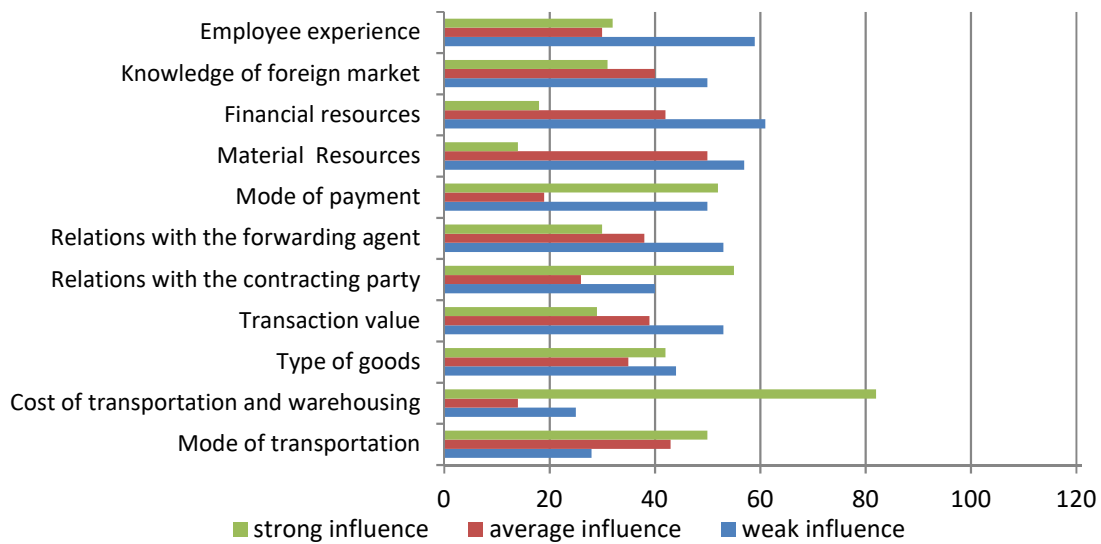
The factors affecting the choice of Incoterms® indicated by the respondents were presented in the subsequent three figures.

The findings indicated that legal regulations on foreign markets and geographical distance were the external factors which had the strongest influence on companies' decision-making on Incoterms®. It was also observed that prices for international transport and freight forwarding services and existing transport and logistics infrastructure (domestically and abroad) as well as risks on foreign markets (including political risks) had the big significance for choosing the Incoterms®. On the other hand, most of companies don't consider domestic and foreign competition as a factor strongly affecting their decisions

on Incoterms® which may suggest that the use of Incoterms® as a tool for building competitive advantage is often underestimated (Figure 2).



**Figure 2. Respondents' view on external factors affecting the selection of Incoterms® (number of indications)**  
Source: own elaboration.



**Figure 3. Respondents' view on internal factors affecting the selection of Incoterms® (number of indications)**  
Source: own elaboration.

Among the internal determinants, the cost of transportation and warehousing was the factor having the strongest influence on the selection of Incoterms®. Furthermore, another factors considered to have a great influence on decisions on Incoterms® (however, relatively substantially weaker than the factor mentioned in the first place) are relations with the contracting party, mode of payment and mode of transportation. Among the factors assessed as having a relatively small impact on the choice of Incoterms® are, among others, employees experience, financial and material resources and transaction value (Figure 3). The results of the research are partly in line with other similar studies. One surprise, however, is the relatively low power of influence attributed to the value of a single transaction and the financial resources of a company. Also many respondents seem not to see a link between the choice of Incoterms® and the method of payment.

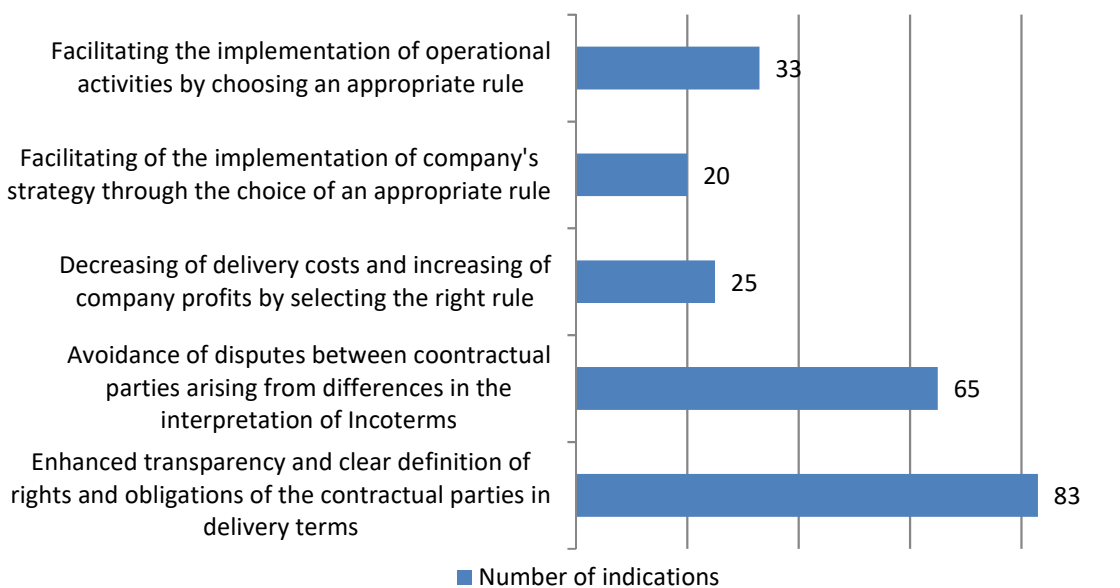


**Figure 4. Respondents' view on both external and internal factors (in %)**

Note: The frequency of indications calculated in %. It does not sum up to 100%

Source: own elaboration.

Analyzing the influence of both external and internal factors on companies' decisions regarding Incoterms®, it was found that cost of transportation and warehousing is the main factor which companies take into the consideration when selecting Incoterms® customs rules (37%), followed by bureaucracy, documentation (31%), mode of transportation (28%), risks on foreign markets (26%) and the availability of freight forwarding services (26%). The factors which are taken into account in choosing Incoterms® to a smallest degree are: type of goods, tax regulations, financial resources, relations with the forwarding agent (Figure 4). The respondents also indicated additional factors (not included in the list), such as, for example, efforts to synchronize the date of shipment with production plans, and the use of the possibility of consolidating deliveries.



**Figure 5. Respondents view on advantages of using the Incoterms®**

Source: own elaboration.

Among the benefits of using Incoterms<sup>®</sup>, the respondents mentioned mainly enhanced transparency and clear definition of contractual rights and obligations regarding the delivery and the avoidance of disputes arising from differences in the interpretation of delivery terms. The other listed benefits received a lower number of respondents' indications (Figure 5). This may indicate that managers perceive Incoterms<sup>®</sup> mainly as a way of clarifying the rights and obligations of the contractual parties, which allows avoiding or facilitating the resolution of potential conflicts. Still, to a lesser extent, they consider them a tool for building a strategic competitive advantage and obtaining additional financial gains. This latter finding is in line with the outcome of the study by Deloitte (2020).

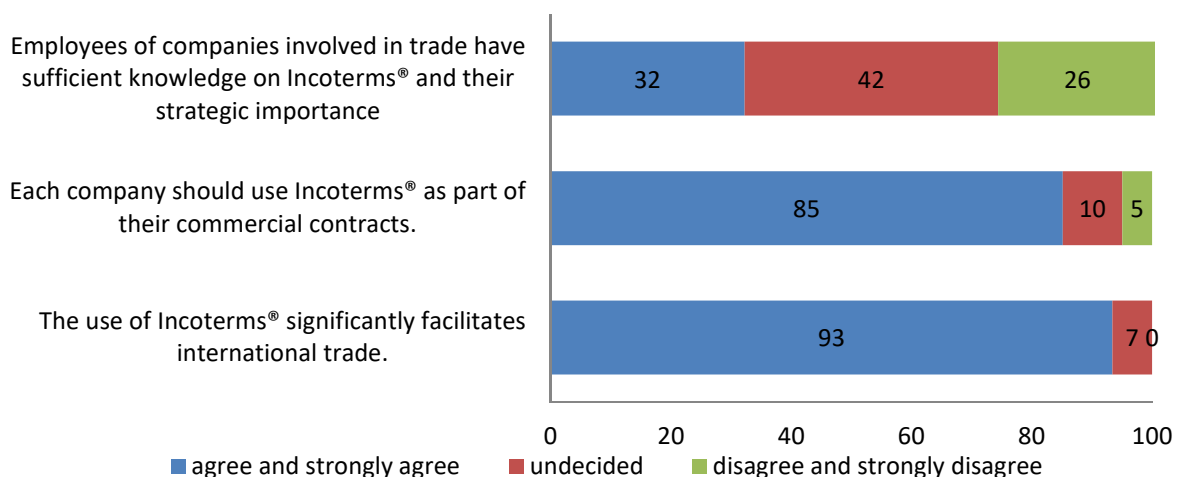
Incoterms<sup>®</sup> rules influence all business aspects determining various processes within a company, from sourcing to sales, from legal to finance, from business operations to corporate strategy. We asked the respondents if they saw the impact of Incoterms<sup>®</sup> on selected aspects of the company's operations. The obtained responses are presented in the Table 4 and Figure 6.

**Table 4. Respondents' view on the impact of Incoterms<sup>®</sup> on selected aspects of their business (beyond defining the terms of delivery) in %**

Description/Answers	observed	not observed	don't know
The impact of Incoterms <sup>®</sup> selection on the company's financial performance in export	24.2	8.4	67.4
Calculating the selling prices based on Incoterms <sup>®</sup>	81.3	8.3	10.4
Problems with the fulfillment of obligations arising from the Incoterms <sup>®</sup> chosen	13.4	72.2	14.4
Company engagement in a dispute over rights and obligations arising from Incoterms <sup>®</sup>	13.5	62.5	24.0

Source: own study.

On the one hand, Incoterms<sup>®</sup> are used by one in four surveyed companies when calculating price. On the other hand, however, smaller percentage of respondents believe that the Incoterms<sup>®</sup> have impact on company's financial performance in exports. The majority of respondents representing the surveyed companies were not involved in disputes arising from the use of Incoterms<sup>®</sup> in purchase and sales contracts. Only one in ten respondents was informed of the occurrence of disputes relating to the use of Incoterms<sup>®</sup> in their companies (Table 4). At the same time respondents were aware of the important role that the Incoterms<sup>®</sup> rules can play in export and import contracts, which was confirmed by the results presented in Figure 6.

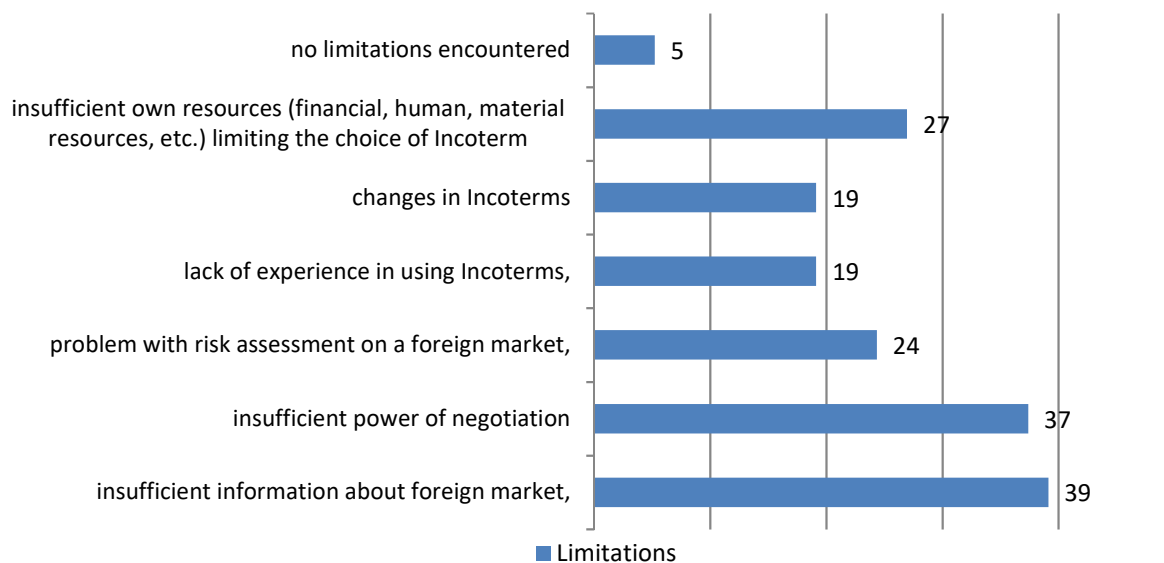


**Figure 6. Comments provided by the respondents on the importance of Incoterms<sup>®</sup> in business activities (in %)**

Source: own elaboration.

Respondents indicated that the use of Incoterms<sup>®</sup> can facilitate international trade (93%), and that they play an important role in concluding sales and purchase contracts (85%). At the same time, in their view, the employees involved in international trade do not have sufficient knowledge and skills

to use the Incoterms® rules appropriately (Figure 6). They also recognized the limitations of using Incoterms® in their companies.

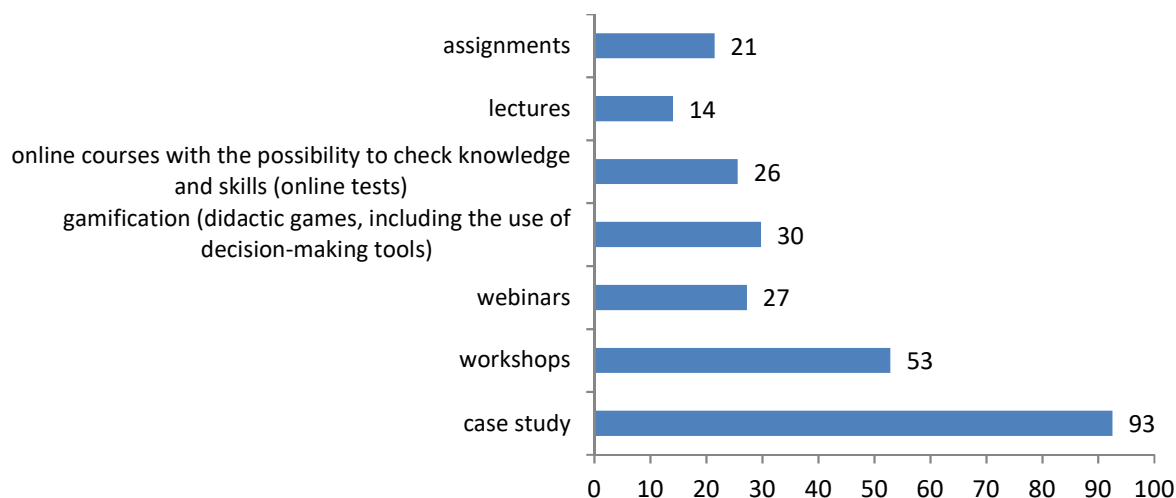


**Figure 7. Respondents’ view on the limitation in setting of the right delivery terms in purchase/sales contracts (in %)**

Note: The frequency of indications was calculated in %. It does not sum up to 100%, as respondents could choose more than one answer.

Source: own elaboration.

Among the most frequently highlighted limitations of using Incoterms®, respondents mentioned insufficient information about foreign market (39% of indications) and insufficient power of negotiations (37%). In nearly one in four companies, insufficient own resources (27% of indications) and foreign market risk assessment (24% of indications) were barriers in choosing the right Incoterms®. In addition, one in five respondents indicated a lack of experience in using Incoterms®, as well as changes made in subsequent editions of Incoterms® released every 10 years (Figure 7). These latter limitations indicate a need for training in the use of Incoterms®. Our survey also supported this respondents’ view, as 83% respondents saw the need to further develop their knowledge and skills in the use of Incoterms®. Respondents also selected the most suitable forms of training that in their opinion would be the most effective in acquiring skills needed for the proper application of Incoterms® (Figure 8).



**Figure 8. Respondents’ view on preferred forms of training concerning implementation of Incoterms® (in %)**

Source: own elaboration.



Case studies and workshops are considered by the majority of respondents (93% and 53% of indications, respectively) to be the most popular training in improving the respondents' skills in the use of Incoterms®. There would be less interest in gamification (30% of indications), webinars (27% of indications) and online courses (26% of indications) (Figure 8).

Our research was limited by company reticence to provide data regarding their engagement in international trade activities. Despite addressing our questionnaire to approximately 1,500 respondents, we manage to obtain about 8% response rate. Furthermore, our research sample was dominated by large enterprises. This may be due to the fact that small enterprises, which constitute the majority of economic entities in Poland mostly represent a low degree of internationalization or do not conduct foreign trade at all. The applied research method did not enable to verify whether or not a correlation exists between Incoterms® selection and export performance. It only allows to identify the internal and external factors affecting the actual choice of Incoterms® rule and their force of impact on companies' decisions. However, in our opinion the applied methods does not depreciate the cognitive value of the presented article. The obtained results can be a starting points for further study using more advanced methods and covering new areas of analysis such as for example the differences in the use of this tool in companies representing different sectors or different cultures or measuring their impact on business performance.

## CONCLUSIONS

The purpose of this paper was to determine factors which influence the decisions on selection of particular Incoterms® rules in international business contracts in companies operating in Poland. The main problem faced by many companies is making incorrect decisions on Incoterms®, without careful consideration of various factors in the Incoterms® selection process, which can affect cost, risks, liabilities and formalities of international transactions. Traders often underestimate their potential, choosing terms without much reflection and continuing to use the same Incoterms® even if other conditions of transactions differ significantly.

On the basis of the obtained results, it can be stated that companies prefer to conclude transactions under Incoterms®, which involve minimal effort (EXW in exporting and DAP in importing) and do not require carrying out additional obligations and/or taking extra risks.

The findings indicated that legal regulations on foreign markets and geographical distance were the external factors which had the strongest influence on companies' decision-making on Incoterms®. Among the internal determinants, the cost of transportation and warehousing was the factor affecting the selection of Incoterms® the most. The fact that most of companies don't consider domestic and foreign competition as a factor strongly affecting their decisions on Incoterms® may suggest that the use of Incoterms® as a strategic tool for building competitive advantage is often underestimated. Also, many traders seem to be mainly focused on cost of transportation but do not see the link between Incoterms® and terms of payment or other financial aspects of transaction.

Knowledge and understanding of Incoterms® is crucial in international trade. The selection of Incoterms® is often considered as a difficult task because of the insufficient knowledge in this field and because the choice of appropriate Incoterms® tends to be considered as a constraint rather than as an opportunity to improve the efficiency of an international deal. Our respondents are aware of the benefits of Incoterms® in the field of enhanced transparency and clear definition of rights and obligations of the contractual parties with regard to delivery terms and thus avoiding conflicts or facilitating the settling of disputes, but do not fully appreciate their role as a strategic tool, which can increase the efficiency and cut costs across the supply chain. At the same time, the vast majority of respondents stated that there is a need of training in this field.

Our research was an attempt to fill the gap in knowledge regarding Incoterms®, and the obtained results can be used both by entrepreneurs making decisions about Incoterms®, who need guidance on their correct application, and by educators, which should better respond to the need to expand knowledge and skills about Incoterms®, especially with respect to Incoterms® selection and its determinants, by shaping their educational offer appropriately.

Nevertheless, this study has some limitations, which include a low response rate due to companies' reluctance to provide information, the sample dominated by large and medium companies, not taking into account the specificity of individual industries.

The further research on the use of Incoterms® in sales and purchase contracts could focus more on the sector of small and medium-sized enterprises, which is a dominant business sector in many national economies. It would be beneficial to analyze the differences in the use of this tool across countries or industries. Examining the correlation between Incoterms® selection and export performance as well as measuring the influence of Incoterms® on improving company efficiency and cutting costs across the supply chain could also prove interesting to study.

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The contribution share of authors is equal and amounted to 50% for each of them.


AH – conceptualisation, literature review, designing a questionnaire, methodology, discussion;

BP – conceptualisation, methodology, contributing to designing questionnaire, calculations, discussion.

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#### Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Degree of internationalization and financial performance of gaming businesses: A study of CD Projekt capital group

Sławomir Szwajkosz

## ABSTRACT

**Objective:** This article aims to evaluate the impact of the internationalization process of firms on their financial situation. Through the research process presented in this study, I verify whether financial analysis can have its legitimate application in assessing the internationalization of a firm in the gaming industry. This verification is done on the example of the CD Projekt capital group. The process of scientific reasoning in this paper will bring closer to the fulfilment of the main research objective – to answer the question about the desirability of applying ratio analysis in the research domain of internationalization of firms.

**Research Design & Methods:** This paper applies an indicator analysis. Over the years of development of this analysis, researchers separated, measured, and formed the four most essential elements of its financial functioning to enable their evaluation. Using the literature on the subject, calculating tools and my knowledge, I independently prepared and developed eleven indicators that constitute the foundation of the research process presented in this article. The indicators will verify the hypotheses posed through calculations and interpretation of correlation coefficients between variables.

**Findings:** The effect of partial or complete confirmation of the hypotheses adopted in the introduction is to confirm that the company's internationalisation in the gaming industry has a positive impact on its financial condition. The result of the study is also the conclusion that the company's internationalisation has had a positive impact on almost every aspect of the CD Projekt capital group's operations and its current position is directly attributable to the internationalization process.

**Implications & Recommendations:** To simplify the analysis, topic has been reduced to the example of a company in the gaming industry. I note, however, that the indicator analysis also seems to be a tool to assess the process of internationalization within other separate industries or sectors and therefore recommends further study of the issue.

**Contribution & Value Added:** The use of indicator analysis in the research domain of the internationalization of enterprises has been the subject of scientific studies for some time. However, the attempt to implement the issue in the specificity of the creative industry is, according to the state of the author's knowledge, a kind of novelty. This work aimed to assess the impact of the internationalization process of a company in the gaming industry on its financial position. This goal was achieved, which confirms, following the principle of deductive reasoning, that assessing the impact of the internationalization process of the company based on indicator analysis retains economic sense.

**Article type:** research article

**Keywords:** indicator analysis; internationalization of firms; financial performance; international business; gaming business; creative corporate finance

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## INTRODUCTION

Entrepreneurship is a social as well as an economic phenomenon, and attitudes and perceptions are important influences on the nature and level of that entrepreneurship (Global Entrepreneurship Monitor, 2021). The result of a global attitude and the ability to see an opportunity to grow a business regardless of where that opportunity arises is a shift in weight from focusing on the deepest possible market penetration to diversifying risk by operating in as many markets as possible. In reviewing the theory of internationalization, one may think that only manufacturing companies can benefit from internationalization. However, in this paper, I will prove that creative industries, including game business, which can be considered as most susceptible to internationalization factors, can also use internationalization instruments to improve their financial performance.

The objective of this article is to evaluate the impact of the internationalization process of firms on their financial situation. In this paper, I present and evaluate the assessment of the impact of the internationalisation process of a company from the innovative computer games industry, using a case study of the leader of the computer games market in Poland, listed on the Warsaw Stock Exchange – CD Projekt Capital Group. I will evaluate the impact of the internationalisation process by using the structure of the ratio analysis of the company, proposed in Security Analysis (Graham & Dodd, 2009), and relating changes in indicators determining the firm's financial position to changes in the geographical structure of income. The ex-post analysis will be based on ten consecutive reporting periods and will allow us to capture changes that may only become apparent in the long term.

Studies conducted in the literature on the subject, aimed at capturing the impact of the company's internationalisation on its financial performance, seem to be limited only to industrial companies (Barłóżewski & Trąpczyński, 2021; Chalmers *et al.*, 2020; Steinbruch *et al.*, 2020; Trąpczyński, & Halaszovich, 2021). This action is understandable since industry represents a conservative, understandable business whose influence on the world economy was undeniable. Today, however, it is services that are becoming the backbone of the modern economy. Offshoring and outsourcing seem to be the cause of economic growth and development for many countries such as India, the Philippines or Vietnam (Cushman & Wakefield, 2015), rising to the first position in outsourcing services due to rising labour costs in China. Therefore, I will focus on the industry directly related to the creative sector and digital technologies being the future of today's globalised economy (Maciejewski & Głodowska, 2020; Rymarczyk, 2020).

The article consists of three main parts. It begins with a literature review and an indication and description of the research methodology. I will then focus on presenting and discussing its results. The conclusion, which will falsify or confirm the hypotheses articulated in the introduction, will constitute the last part of this paper.

## LITERATURE REVIEW

The extant literature is rich in various theories, models and concepts explaining internationalization of the firms (Wach, 2021), however the leading position belongs to management theory and economic theory, while the financial theory lags behind. International expansion is a crucial decision for firms that regularly face transitional payment problems and concentrate their activities mainly on their home market (Ketels, 2016) and it is extremely important for young innovative firms (Wach, 2016). It affects small and medium-sized enterprises (SMEs), i.e., firms with no or relatively little international experience. It constitutes for them a kind of barrier to entering new markets. As a result, they interpret international activity through the prism of the costs it generates, often forgetting that the initiation of internationalisation processes is associated with a range of benefits, such as risk diversification, economies of scale or protection against market fluctuations or changes in trends, which often become the cause of liquidity problems for the company. Based on several studies, including those presented by the Ahroni's thesis (Ahroni, 1966), foreign investments generally are perceived as bearing a much higher risk than domestic investments due to the limited availability of information about foreign markets and the higher cost of obtaining information about the home market. The prospect theory, in turn,

suggests that a company's financial performance correlate negatively with its willingness to take risks (Kahneman & Tversky, 1979). It means that when a company meets the performance targets set by decision-makers, they are inclined to choose many lower-risk strategies to maintain their profits. It illustrates a situation in which, on the one hand, managers who achieve tangible benefits are not willing to take risks associated with the process of internationalisation. However, on the other hand, when the company's financial situation forces its executives to react. They, due to low international awareness, do not use the opportunities guaranteed by international markets and do not initiate internationalisation. However, the prospect theory complements the extremes related to the entity's financial situation, i.e., high liquidity and unprofitable activity, consistently assuming that the worse its result, the more risk it is willing to take. If the company characterises over-liquidity, it will be more willing to look for places to invest its capital (Jung & Bansal, 2009). In the first case, when results are lower than expected, managers will evaluate current strategies and, as losses escalate, will accept a higher level of risk. In the opposite situation, they will regard internationalisation as an investment - forgoing the distribution of today's profits favouring future and uncertain profits. This observation provides the basis for the thesis of a relationship between internationalisation and company performance, but one can only speak of correlation, not causation, at this stage of the study of the issue. The aspect of the search for a causal relationship in international literature has been present for some time.

In recent years, research has mainly focused on the extent to which the degree of internationalisation (DOI) influences corporate performance. Some of these studies suggest that firms, to some extent, preserve the mobility of their resources to achieve economies of scale and exploit imperfections in markets and expand their business opportunities (Chalmers *et al.*, 2020; Gomes & Ramaswamy, 1999; Steinbruch *et al.*, 2020; Tallamn & Li, 1966). This theory notes that firms do not become multinational unless there is an opportunity for advantage, so foreign expansion must positively impact firm performance (López-Morales & Gómez-Casas, 2015). However, the popularisation of research in this area is becoming a reason to abandon this scientific consensus favouring the many models developed over recent decades. Studies on the impact of internationalisation in British industrial centres have shown a linear convergence between degree of internationalisation (DOI) and company performance with an upward trend (Grant, 1987), which means that a greater DOI generates an increase in economic benefits for companies. Another study presented by Gomes and Ramaswamy (1999) empirically proved that, in fact, between the two coefficients, there is a linear convergence. However, with a negative trend, the DOI, over time, negatively affects productivity, so it remains positive in productivity, but these benefits begin to decrease and are not as great as at the beginning of the international expansion (Gomes & Ramaswamy, 1999). The dispute about the convergence of the linear impact of internationalisation on firm performance some attempted to overcome by other researchers who argued that this relationship is not linear but U-shaped. However, the empirical re-adaptation of the model showed two faces of this relationship. One, supporters of the U-shaped form of the relationship considered that companies initially represent a negative performance related to the costs of internationalisation, but when internationalisation begins to bring tangible benefits, the trend slowly turns into an increasing relationship (Ruigrok & Wagner, 2003). The model's shape has been adopted by opponents of this theory, suggesting that the inverted letter "U" fulfils the characteristics of describing economic reality. Basing the thesis on empirical evidence, they suggested that the relationship takes the form of an inverted letter "U" between DOI and company performance, which means that with time and increasing scale of the degree of internationalisation, the positive impact on the company's performance offsets by the costs of coordinating international operations in different countries (Gomes & Ramaswamy, 1999).

One of the most significant conclusions from the above models is that internationalisation does impact corporate financial performance. It continues to be an influence that requires further research, whose structure and contingency still elude researchers in its irrevocable form. The corporate performance itself is a construct that results from several not undeviating related factors arising from the company's ventures and external factors. The binary adoption of this relationship is essential because the internationalisation of businesses today is considered a factor in the entity's success. The fact that relational models do not fully explain the phenomenon does not mean that their understanding does

not affect the decision-making process because just the awareness of this relationship can affect the company's strategy.

## RESEARCH METHODOLOGY

In the literature on the subject, it seems to be gaining popularity to study the impact of the internationalisation of a business unit on its financial performance by comparing the above to the DOI internationalisation scale or the transnationality (TNI) coefficient proposed by UNCTAD (2007). Over many decades of development of the research domain, many researchers have pointed out that the main element for assessing the degree of internationalisation should be the share of foreign sales in the company's total sales (FSTS). Siddharthan and Lall (1982), based on a study of the 100 largest multinational corporations of the United States in terms of firm growth, where they took FSTS as the independent variable, concluded that the degree of internationalisation had a negative impact on the firm's growth rate (Siddharthan & Lall, 1982). Other researchers, again based on the 100 largest multinational corporations in the United States but enriching the research sample with the 100 largest European corporations, concluded that financial performance improved monotonically with increasing FSTS, but peaked and declined when FSTS exceeded the 60% – 80% FSTS threshold (Geringer *et al.*, 1989). This conclusion was contrary to the research of Daniels and Bracker (1989), who, based on 116 American multinational corporations, confirmed the thesis on the effect of internationalisation on corporate financial performance, where the researchers designated FSTS as the independent variable. Adopting the share of foreign sales in total sales as the only estimator of the scale of internationalisation DOI seems problematic. Nevertheless, as an external observer, it is not straightforward to obtain the information regarding the company necessary to determine the transnationality index (TNI) or transnational activities spread index (TASI). However, according to the Polish Accounting Act and the Code of Commercial Partnerships and Companies, it is obligated to report revenues from sales of foreign origin, which exhibits ease to convert into a ratio comparing foreign sales to total sales. Consequently, although the practice of using the FSTS indicator is fraught with research uncertainty, it is one of the few pieces of information that a researcher can swiftly obtain at the stage of aggregating a company's financial information; therefore I, emphasising awareness of the problems of using the above indicator, decide to use it in this study.

The evaluation of the impact of this aspect of internationalisation on the company's financial performance will be presented in four financial fields of the company's performance, represented by four groups of financial ratios. At the same time, the study's main objective is the correlational assessment of the relationship between the financial situation represented by the above-mentioned financial ratios and its internationalisation, represented by the FSTS ratio, which is the resultant of the analysed geographical structure of income. Within the framework of the article's primary objective thus formulated, I am articulating a specific objective to verify the economic sense of applying the FSTS indicator in assessing the impact of the company's internationalisation on its financial performance.

The research process for this article involves the verification of the following research hypotheses:

- H1:** There is a correlation between increasing foreign sales shares in total sales and improving liquidity performance of the firm.
- H2:** There is a correlation between an increase in the share of foreign sales in total sales and improving the profitability performance of the firm.
- H3:** There is a correlation between increased foreign sales shares in total sales and a reduction in the firm's debt.
- H4:** There is a correlation between increasing foreign sales shares in total sales and increasing management efficiency of the firm.
- H5:** Using the ratio of the share of foreign sales to total sales in determining the impact of internationalisation on a firm's financial performance retains an economic sense.
- H6:** The degree of internationalisation of a firm (DOI) has a positive impact on its financial position.

The method used in this study – a case study, applied as a deductive method, will constitute a check or analysis of the relationships between variables, which are the basis of quantitative research methods. Within the framework of the present work, I decided to precisely choose the case study method, thus constituting an analysis of existing statistical data, as it constitutes a systematic procedure implemented to audit the content of recorded information in the form of statistical data, where the source of these data will be the enterprise itself, which is obliged to publish financial statements. In order to verify the research hypotheses, the paper applies the indicator analysis, whose history of application dates back to the second half of the 19th century (Horrigan, 1968) when, along with the development and industrial maturity of the United States, there was a growing demand for solutions in financial mathematics that would make it possible to evaluate a company's economic and financial performance. During the development of this tool, authors of the indicator analysis separated the four most essential elements of a company's financial performance. Using the literature on the subject, calculating tools and my knowledge, I developed eleven indicators that constitute the foundation of the research process presented in this paper, and these are as follows:

- I. Financial liquidity ratios: (1) Current ratio, (2) Quick ratio;
- II. Profitability ratios: (3) Return on Sales, (4) Return on Assets, (5) Return on Equity;
- III. Company debt ratios: (6) Debt ratio, (7) Long-term debt ratio, (8) Long term capital fixed to assets;
- IV. Company management efficiency ratios: (9) Total asset turnover, (10) Receivable's turnover in days.

The indicators resulting from the analysis of the company's financial data will be related to the geographical structure of CD Projekt's revenue, thanks to the correlation method proposed by Karl Pearson as follows (Mukaka, 2012):

$$r = \frac{cov[X, Y]}{\sigma[X] * \sigma[Y]}$$

In addition to the sources of statistical data, which are the financial statements of the company CD Projekt from 2010 to 2019 (period of 10 years), published in the court and business monitor, while fulfilling the obligation under the law of the country following the address of the registered office of the company, I will also use the literature on the subject published both in the continuous publication and industry journals.

## RESULTS AND DISCUSSION

### Geographical structure of revenue

One of the elements that do not appear in the literature and the interpretation of the indicator analysis is the analysis of the geographic structure of revenue. It can provide me with knowledge about the possible diversification of the company's sources of income and, what seems essential from the point of view of the subject of this article, some knowledge about the internationalization of the studied company. Given the presented observation, I decide to enrich the analysis with the geographical structure of revenue and the related internationalization index FSTS. The table presents the aggregated geographical structure of revenue of the CD Projekt capital group, for which data I obtained from consecutive consolidated financial statements of the CD Projekt capital Group (Table 1).

### Relationship between CD Projekt's liquidity analysis and internationalization

For an analysis of a company's liquidity, it seems crucial to use factors that reflect the entity's ability to meet its short-term obligations, while relating these values to the changing geographical structure of exports will make it possible to define the correlation between the values indicated, or the lack thereof. The indicators established for this analysis will be (Table 2):

1. Current liquidity ratio (CR), established as the ratio of current assets to current liabilities, informing how many times current assets cover current liabilities.
2. High liquidity ratio (QR), established as the relation of total assets fewer inventories and prepayments and accruals to current liabilities, which shows the degree to which current liabilities are covered with assets characterized by a high degree of liquidity.



**Table 1. Geographical structure of CD Projekt's revenue between 2010 and 2019**

Place of revenue	2010 (in %)	2011 (in %)	2012 (in %)	2013 (in %)	2014 (in %)	2015 (in %)	2016 (in %)	2017 (in %)	2018 (in %)	2019 (in %)
<b>Local</b>	<b>73.60</b>	<b>50.30</b>	<b>46.10</b>	<b>43.70</b>	<b>4,32</b>	<b>4,68</b>	<b>4,53</b>	<b>5,29</b>	<b>3,43</b>	<b>3,36</b>
<b>Foreign</b>	<b>26.40</b>	<b>48.70</b>	<b>53.90</b>	<b>56.30</b>	<b>95.68</b>	<b>95.32</b>	<b>95.47</b>	<b>94.71</b>	<b>95.57</b>	<b>96.64</b>
Europe */since 2018 only EU	20.30	17.40	16.30	17.70	34.47	24.94	26.58	23.86	29.08	25.25
North America */since 2018 only U.S.	4.80	27.70	31.20	30.30	47.87	56.83	55.45	53.98	54.99	59.95
South America */until 2018 N/A	–	–	–	–	–	–	–	–	0.75	0.67
Asia */until 2019 USSR + Asia	0.30	1.00	2.20	2.10	2.74	7.86	8.79	10.64	8.53	8.59
Australia */until 2018 N/A	–	–	–	–	–	–	–	–	1.98	2.06
Africa */until 2018 N/A	–	–	–	–	–	–	–	–	0.24	0.12
Rest */since 2018 N/A	1.00	3.60	4.20	6.20	10.60	5.69	4.65	6.23	–	–

Notes: \* – indicates a change in data presentation methodology; N/A – stands as not applicable.

Source: own compilation based on: Consolidated financial statements of CD Projekt Capital Group for 2019 and previous years.

**Table 2. Profitability ratios of CD Projekt capital group for the years 2010-2019**

Profitability Analysis	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
CR	1.05	1.74	2.48	2.70	1.98	3.67	7.85	7.68	6.23	2.65
QR	0.48	0.90	1.45	1.37	0.69	3.58	7.68	7.53	6.12	2.53

Source: own compilation based on: Consolidated financial statements of CD Projekt Capital Group for 2019 and previous years.

An analysis of the development of liquidity ratios at CD Projekt between 2010 and 2019 shows that the company maintained its financial liquidity throughout the analyzed period. However, in the initial period, i.e., in 2010, the company may have recorded temporary problems with the current payment of liabilities, as the ratio of coverage of liabilities with assets indicates their borderline low levels. In 2011-2014, the level of financial liquidity was at an almost optimal level; however, in 2015-2018, the company recorded a significant over-liquidity (working capital resources in 2017-2018 exceeded current liabilities by almost eight times), only to approach the optimal level of indicator values again in 2018. Having analyzed the company's financial liquidity, it is worth relating the indicated values to the geographical structure of revenue. The relation will determine how the values of financial liquidity ratios correlate with changes in the company's revenue sources and justify the correlation or lack thereof.

**Table 3. Summary of correlations of CD Projekt liquidity analysis indicators to the geographical structure of revenue in the period 2010-2019**

Geographical breakdown of revenue	Liquidity indicators	Correlation coefficient value
FSTS (Foreign Sales to Total Sales)	CR (Current Ratio)	0.6311
	QR (Quick Ratio)	0.6459

Source: own compilation based on: Consolidated financial statements of CD Projekt Capital Group for 2019 and previous years.

CD Projekt's penetration of the domestic market is so high that to increase cash inflows, the company must expand beyond its home market and broaden its customer base to include foreign customers. This observation seems significant because both the current ratio and the high liquidity ratio show that in CD Projekt, an increasing percentage of export sales correlates highly with an increase in liquidity ratios (Table 3), the reason for which is the limited possibility of expanding the customer base in the domestic market. This also means that in the case in question, the increasing DOI (according to the FSTS measure) to a significant extent leads (or, using the literature on the subject directly, "correlates highly") to an improvement in the company's financial liquidity, which allows me to confirm the hypothesis that there is a correlation between the increase in the share of foreign sales in total sales and the improving liquidity results of the company. Especially in the era of digital distribution, where the company does not have to spend money on transporting or packaging the product, the main cost appearing in the product's price is its production cost. Therefore, an increasing volume of sales allows the fixed costs to be spread over a more significant number of copies of the game sold, which affects

the revenue generated from the sale of products. It is, therefore, reasonable to conclude that in the case of the company in question, its internationalization had a positive impact on its liquidity.

#### Relationship between CD Projekt's profitability analysis and internationalization

The result of actions determined by effectiveness, efficiency and adaptability is a profitable activity. The usage of these determinants leads to a particular situation. The expected output of it is profitability based not only on the company's specific activities but also on the enterprise. However, the profitability of an enterprise can be evaluated based on the context of the measures used to assess it, focusing on the profitability of sales, assets, or equity involved (Moscuciov *et al.*, 2010). To carry out the analysis, indicators I will apply to present, analyze and evaluate the profitability of CD Projekt in the years 2010-2019. Indicators representing each aspect of profitability will serve this purpose, and they will be as follows (Table 4):

1. Return on Sales (ROS), determined as the percentage of net profit in net sales, showing what profit margin a specific volume of sales brings;
2. Return on Assets (ROA), calculated as a percentage of net profit in the total value of assets, indicating the ability of assets to generate profit, thus providing information on the effectiveness of asset management in the company liquidity;
3. Return on Equity (ROE), determined as the value of net profit concerning the value of equity and expressed as a percentage, provides information on the effectiveness of equity.

**Table 4. Profitability ratios of CD Projekt Capital Group for the years 2010-2019**

Profitability analysis	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
ROS	-6.84%	17.30%	17.15%	10.18%	4.86%	42.91%	42.90%	43.24%	30.13%	33.63%
ROA	-4.44%	19.09%	18.56%	8.67%	2.78%	66.66%	32.24%	22.68%	10.90%	15.86%
ROE	-2.06%	12.72%	13.86%	6.65%	1.88%	51.95%	28.63%	20.40%	9.70%	12.49%

Source: own compilation based on: Consolidated financial statements of CD Projekt Capital Group for 2019 and previous years.

The higher the value of the profitability ratios, the more profitable the company's activity is. However, it is difficult to determine their optimum level as absolute values, so the literature on the subject points instead to their assessment through the prism of changes over time, rather than an analysis of specific values somehow separated from the previous ones. An analysis of profitability ratios in CD Projekt Capital Group in the years 2010-2019 emphatically proves the existence of two periods of the company's development – the years 2010-2014 and the years 2015-2019. In the first period indicated, and more specifically its initial year, the company recorded losses, resulting from the costs of sales, overheads, and other operating costs, which absorbed the company's profit. The following years of the period in question saw a definite improvement in the ratios resulting from the release of the company's new product, which had a positive effect on sales, raising the value of the sales profitability ratios to the range of 4.86% – 17.30%, return on capital to the range of 2.78% – 19.09% and return on assets, which was in the range of 1.86% – 6.65%. In the next separated period, i.e., from 2015 to 2019, the company's profitability results were already characterized by very high profits and thus also by above-average good profitability ratios. In the second period of the company's operations, the ranges of the above were set at levels of 30.13% – 42.91% for sales profitability, 10.90% – 66.66% for capital profitability and 9.70% – 51.95% for asset profitability. Again, as in the case of the liquidity analysis, it is worthwhile to relate the indicated profitability ratios to the geographical revenue structure by determining whether a change in the FSTS ratio and, therefore, a change in the share of foreign sales in total sales, statistically explains the changes in the profitability ratios (Table 5).

The analysis of correlation ratios can begin with the ratio presenting the lowest value, which means a value of 0.4446 for the ROE ratio. According to Pearson's interpretation of the correlation coefficient, in the case of the company CD Projekt in 2010-2019, the increasing percentage of export sales correlates on average with the increase in the return on equity ratio (Table 5). A high value of this ratio also higher capital efficiency, as it creates opportunities to obtain high dividends and allows to use part of the funds for further business development. The increasing value of net profit while

maintaining the value of capital at the same level will increase the theoretical effectiveness of the company; however, using the correlation index to determine the convergence of changes in the profitability index and changes in the geographical structure of income, certain aspects of the company's activity should not be overlooked. It can be observed, when analyzing operations on the company's capital, that activities that cause a decrease in the value of the return on equity ratio positively affect the capital structure, increasing the share of equity in the total capital, thus reducing the financial leverage, and thus have their positive impact on the valuation and profitability of the company. Therefore, the correlation between ROE and the geographical structure of income exists and is observable. However, apart from increasing net profits, the stock company performs several activities and operations, not observable within the correlation indicator, which has its own financial or accounting justification but negatively influences the correlation coefficient.

**Table 5. Summary of correlations of CD Projekt profitability analysis indicators to the geographical structure of revenue in the period 2010-2019**

Geographical breakdown of revenue	Profitability indicators	Correlation coefficient value
FSTS (Foreign sales to total sales)	ROS (Return on Sales)	0.5020
	ROA (Return on Assets)	0.4446
	ROE (Return on Equity)	0.4779

Source: own compilation based on: Consolidated financial statements of CD Projekt Capital Group for 2019 and previous years.

A further consideration in discussing the correlation values of the geographical composition of revenue and ROA is that the use of a correlation as simple as Pearson's coefficient does not consider an essential piece of information for the analysis, the volume of foreign trade. Profits from abroad lag the share of the revenue from abroad in the geographical structure at specific points. The situation is quite the opposite when the discussed geographical structure is related to the Return on Sales, which shows a very high correlation, and which can be interpreted as the fact that the increasing percentage of foreign sales in total sales has a direct impact on the increase in the return on sales ratio. That confirms the hypothesis, which assumed a correlation between increasing foreign sales shares in total sales and improving the company's profitability results. This effect is related to the fact that foreign markets are potentially more absorptive, even with a low penetration level, than domestic markets, as proven by the economies of scale theory. The export development of the publishing studio CD Projekt was directly linked to opening to foreign markets characterized by a much greater capacity than the domestic market. Therefore, in the case of the company in question, the thesis that increasing the share of the revenue from export sales in the geographical structure of revenue is associated with an increase in sales profitability is justified.

#### **Relationship between CD Projekt's debt analysis and internationalization**

Even companies unrivalled industry leaders and the largest private entity listed on the Warsaw Stock Exchange in terms of accumulated assets cannot rely solely on equity. The main objective of a debt analysis is to determine the level and structure of a company's external capital by verifying whether the level of external capital threatens the company's financial independence (Gabrusewicz, 2014). The desired effect of this analysis is to determine whether the company can pay its long-term debts within a certain period and in a certain amount. As part of the debt analysis, the following measures will be indicated and calculated (Table 6):

1. Debt ratio (DR, from Debt ratio) as the ratio of total liabilities and provisions for liabilities to total assets of the company, informing mainly about the importance of foreign capital in financing the company's assets (Wach, 2017);
2. Long-term debt ratio (LTDR) as a relation of long-term debt to equity, expressed as a percentage, informs about the burden of equity with external, long-term forms of financing;
3. Long term capital to assets ratio (LTCFA), as a ratio of equity to fixed assets, informing about the degree of financial independence by measuring the share of financing assets with equity.

**Table 6. Debt ratios of CD Projekt Capital Group for the years 2010-2019**

Debt analysis	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
DR	0.54	0.33	0.25	0.23	0.33	0.22	0.11	0.10	0.11	0.21
LTDR	9.53%	4.10%	3.75%	2.38%	0.86%	0.55%	0.95%	0.42%	0.59%	1.79%
LTCFA	1.04	1.44	1.69	1.81	1.82	3.75	4.60	3.47	2.55	1.67

Source: own compilation based on: Consolidated financial statements of CD Projekt Capital Group for 2019 and previous years.

In the case of the general debt ratio, i.e., the ratio of external capital and provisions for liabilities to total company assets, the expected value, according to the literature, should not exceed 50%. Some theoreticians assume that values in the range of 0.57-0.67 constitute the upper, safe limit of this measure. When analyzing the value of the available debt ratio at CD Projekt in the period under analysis, only the initial period, i.e., 2010, raises some concerns. The value of 0.54 approached the upper limit of safe debt but decreased with time, which may indicate the decreasing involvement of debt capital as a form of financing the company's activity, which translates into a permanent decrease in investment risk and an improvement in the company's creditworthiness. However, during the period under review, a noticeable increase in the ratio in 2014 at a level of almost 50%, from a ceiling of 0.23 to 0.33. Perhaps the studio was looking for external sources of financing to complete the project. It might have also prepared for the release of the product by entering contracts before its completion. Another explanation seems to be that the company preferred to operate with someone else's capital, which was losing value over time, rather than with its capital, which brought the company tangible profits, and the whole process did not have a significant impact on the company's debt level (Table 6).

**Table 7. Summary of correlations of CD Projekt debt analysis indicators to the geographical structure of revenue in the period 2010-2019**

Geographical breakdown of revenue	Debt indicators	Correlation coefficient value
FSTS (Foreign sales to total sales)	DR (Debt Ratio)	-0.7666
	LTDR (Long Term Debt Ratio)	-0.9063
	LTCFA (Long Term Capital Fixed to Assets)	0.6631

Source: own compilation based on: Consolidated financial statements of CD Projekt Capital Group for 2019 and previous years.

The first index representing the lowest level of correlation is the equity to fixed assets ratio coefficient, which was at the level of 0.6631, which in the light of interpretation means high correlation. The relatively low correlation coefficient can be explained by the fact that changes in capital value occur in a different period than changes in the geographical structure of income. A different situation occurs in the case of the general debt ratio. Here correlation with the geographical structure and revenue from 2010 to 2019 was -0.7666. Interpreting the above value, that can be concluded that the increasing percentage value of export sales correlates very highly with the decrease in the general debt ratio.

On the one hand, this indicator shows a very high correlation (Table 7), but on the other hand, a specific dependence can be observed, the awareness of which explains the appropriately lower than expected value of the correlation. The degree of overlap is not close to the unit value because it is more economical for a company to acquire free capital from customers who are ready to pay for a product that in principle does not exist yet than to use its capital, which in the meantime, thanks to mechanisms such as O/N deposits (Overnight Deposit) generates real profit for the entity. The value of the indicator will never indicate an almost certain correlation in a situation in which the company behaves economically, which is understood by looking for the cheapest and lowest-risk forms of financing, and indebtedness generated as an advance from customers, which is capital with basically no costs and does not represent any significant risk. The last correlation coefficient represents an extremely high level and is the correlation coefficient of changes in the geographic structure of revenue and the long-term debt ratio. According to the interpretation of the coefficient, an increasing percentage of export sales almost certainly correlates with a decrease in the long-term debt ratio, which can

be explained by the fact that exports made it possible to generate more and more profits from operations, as shown in the profitability analysis. In the case of CD Projekt, the hypothesis presented by me in the introduction can therefore be accepted that there is a correlation between the increase in the share of foreign sales in total sales and a decrease in the indebtedness of the company.

#### Relationship between CD Projekt's management efficiency analysis and internationalization

The last of the stages of evaluating a company from a financial point of view in the framework of ratio analysis is the analysis of the company's management efficiency, i.e., the translation of the company's skills and capabilities into financial language, through a series of values determining the efficiency of using the company's resources in the realities of the economic environment. Within the analysis framework, I will use two indicators, in my opinion, important from the analysis point of view, which belongs to the group of rotational indicators. Using them, he will establish basic information about the efficiency of CD Projekt's enterprise management in the years 2010-2019 and interpret this information. These will be (Table 8):

1. Asset turnover ratio (TAT), created based on the comparison of net sales revenues to total assets, which informs what part of the company's assets was covered by the profit of a given accounting period;
2. Receivables turnover ratio in days (RT), created based on the average level of trade receivables to total sales revenue, multiplied by the number of days in the accounting period, inform the number of days in which the company's financial resources are frozen in receivables.

**Table 8. CD Projekt Capital Group's business management efficiency indicators for the years 2010-2019**

Efficiency analysis	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
TAT	0.30	0.74	0.81	0.65	0.39	1.21	0.67	0.47	0.32	0.37
RT	–	67.17	70.66	62.01	44.51	21.52	49.78	46.42	41.88	58.32

Source: own compilation based on: Consolidated financial statements of CD Projekt Capital Group for 2019 and previous years.

The TAT ratio indicates the ratio of the company's net profit to the assets that generated this profit, and its value was very high for CD Projekt between 2010 and 2019. The beginning of the examined period, i.e., 2010, was objectively the weakest period in terms of the company's asset turnover, reaching a value of 0.3 (Table 8), which translates into information that the assets accumulated by the company allowed it to generate 30% of its value in net profit. Subsequent years, and therefore subsequent products of the studio, increased this measure accordingly. Analyzing the values of the RT indicator, one can notice the initially long period of waiting for repayment of debts among creditors, which from 2011 to 2013 did not fall below two months. The following two years saw an improvement in collecting debts in 2014 at 45 days and 2015 at the lowest level – 22 days. After 2015, the values returned to a level above 40 days, with a peak in 2019 of 58 days (Table 8).

**Table 9. Summary of correlations of indicators of CD Projekt's management efficiency analysis to the geographical structure of revenue in the period 2010-2019**

Geographical breakdown of revenue	Management efficiency indicators	Correlation coefficient value
FSTS (Foreign Sales to Total Sales)	TAT (Total Asset Turnover)	0.0289
	RT (Receivable turnover in days)	-0.7501

Source: own compilation based on: Consolidated financial statements of CD Projekt Capital Group for 2019 and previous years.

Starting from the value of the RT indicator, an interesting correlation can be observed, which boils down to the interpretation that an increasing percentage of export revenues in total revenues correlates highly with an increase in the value of trade receivables turnover in days (Table 9). The conclusion that can be drawn from the value of the correlation indicator is that the company, along with the increase in international importance and improvement of its competitiveness, shortened the receivables turnover period, requiring contractors to pay receivables in shorter periods. The second of the indicators of the company's management efficiency presented in the table above, i.e., the correlation index of the company's asset turnover and the geographic structure of its revenue, almost shows no

signs of linear correlation (Table 9). That can be concluded with the observation that the company's asset profitability is not related to the changing geographic structure in a linear way, which allows only partial confirmation of the hypothesis that there is a correlation between the increase in the share of foreign sales in total sales and the increasing management efficiency of the company. Table 10 presents the summary of the verifications of all six research hypotheses presented in this article.

**Table 10. Verifications of all six research hypotheses**

No.	Hypotheses	Result
H1:	There is a correlation between increasing foreign sales shares in total sales (FSTS) and improving liquidity performance of the firm.	Confirmed
H2:	There is a correlation between an increase in the share of foreign sales in total sales (FSTS) and improving the profitability performance of the firm.	Confirmed
H3:	There is a correlation between increased foreign sales shares in total sales (FSTS) and a reduction in the firm's debt.	Confirmed
H4:	There is a correlation between increasing foreign sales shares in total sales (FSTS) and increasing management efficiency of the firm.	Confirmed
H5:	Using the ratio of the share of foreign sales to total sales (FSTS) in determining the impact of internationalisation on a firm's financial performance retains an economic sense.	Confirmed
H6:	The degree of internationalisation of a firm (DOI) has a positive impact on its financial position.	Confirmed

Source: own study.

## CONCLUSIONS

The result of the study is undoubtedly the confirmation of the thesis of preserving the economic sense of using the FSTS index in the study of the impact of the company's internationalisation on its financial performance. The specific objective of the preceding article was to assess the effects of the internationalisation process of the company on its financial position, and I achieved this objective, which confirms, according to the principle of deductive reasoning, that the assessment of the impact of the internationalisation process of the company made based on the FSTS indicator retains the economic sense. The study's primary objective was also, thanks to the research presented in this paper, achieved, resulting in the confirmation of the sixth hypothesis, if the internationalisation of the company has a positive impact on its financial position.

As part of the analytical process, thanks to the presentation of output data proving that the company CD Projekt is internationalised and that the change in the value of the company's financial indicators to a certain extent, currently exposed in the correlation statistics, was intimated by changes in the geographical structure of income, it is reasonable to conclude following the derivation rule that the internationalisation of the company discussed in the case study had its desired effect on its financial performance. Based on the analysis of statistical data and case study analysis, the result of the conducted research is the verification of my detailed hypotheses with the result of the study.

In this paper, the only one video game company was presented and discussed (as the case study); however, the noticed trend seems to be maintained within the whole industry. Therefore, there is an obvious need for further attempts to study the impact of internationalization on companies' financial performance within the creative industry. It seems that the video game industry reveals a propensity to internationalize. Therefore, further studies are needed. Since the study presented in this paper was limited to only one sample company (a case study method), the output data does not represent the entire industry (lack of representativeness), but it encourages further exploration of the topic and expand the research, which I strongly recommend.

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#### Conflict of Interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Growing inequalities in the Covid-19 pandemic and their effect on women entrepreneurship: A case of Vietnam

Greeni Maheshwari, Anika Maheshwari

## ABSTRACT

**Objective:** The objective of this study is to provide a general overview regarding the increased inequality due to Covid-19 in various areas and this all had an integrated effect on women-owned small and medium-sized enterprises (SMEs) across the globe and in Vietnam.

**Research Design & Methods:** The data is collected using various research papers and the reports accessing the inequalities across the world and in Vietnam. The methodology used is compiling the various reports to provide general overview as how Covid-19 has fuelled existing inequalities and providing overview of the situation the women-owned SMEs are facing in this challenging time of pandemic.

**Findings:** The results from the study suggest that the inequalities in various areas have increased such as inequality between and within different countries, employment sector inequalities, gender inequalities, educational inequalities, age-related inequalities and all these has created a wider gap between the barriers faced by men and women across the globe. The women-owned SMEs has found to have the higher challenges in Vietnam as compared to men-owned SMEs.

**Implications & Recommendations:** The current literature identified the increasing inequalities of women in various countries and particular in SMEs in Vietnam. There are several studies conducted in developed countries to determine the challenges faced by women entrepreneurs, but there is dearth of studies conducted in Vietnam, especially to study the effect of Covid-19 on the women entrepreneurs. It is important to conduct this kind of study in Vietnam on women SMEs to study the impact of Covid-19 to understand the barriers the women might have faced and how the government can provide the appropriate support to women entrepreneurs in the future which further can help in empowering the women in Vietnam and helping the economy to grow.

**Contribution & Value Added:** This paper provides the general overview of increased inequalities in various areas and in particular women-owned SMEs in Vietnam which is not summarized in earlier studies conducted in Vietnam and hence this study aims to contribute to fill this gap in the literature and provided an avenue for the future research.

**Article type:** conceptual article  
**Keywords:** Covid-19, inequalities, women-owned SMEs, economic impact, entrepreneurship, Vietnam  
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## INTRODUCTION

Due to the outbreak of the global pandemic (the Covid-19 pandemic), several regions of the world were or have still been under the lockdown. In the short run, what appears to be a health crisis could have extensive impacts on economic growth and development in the long run, especially on small and medium-sized enterprises (SMEs). Covid-19 has fuelled already existing economic inequalities in various aspects from education to gender to the ability to work remotely. Estimates from the World Bank show

that the pandemic could push up to 150 million more people into extreme poverty by the end of 2021 (World Bank, 2020a). Most countries in the world have been implementing various strategies preventing the social and economic consequences of the Covid-19 pandemic. Early affected EU countries (such as Italy and Spain) and large Asian countries (such as India and Indonesia) took moderate actions, while later affected countries implemented more influential actions (Kinnunen *et al.*, 2021).

The objective of this study is to provide a general overview regarding the increased inequality due to Covid-19 in various areas and this all had an integrated effect on women owned SMEs across the globe and in Vietnam.

The first part of literature review and theory development of the article provides an overview of various already existed inequalities which has wider the gap even further in different areas due to the Covid-19 pandemic. These inequalities will bring short run and long-run implications on the economy of the countries. The second part of this article deals with the government initiative in Vietnam aiming to reduce the impact of the Covid-19 pandemic on small and medium-sized enterprises (SMEs) and in particular to reduce inequalities among women-owned SMEs in Vietnam.

## LITERATURE REVIEW AND THEORY DEVELOPMENT

### (a) Inequalities in the economies

#### Inequality between countries

The already fragile economies of developing countries are further shattered by compulsory lockdowns imposed by governments. The reduction in aggregate demand and supply-side shocks arising from the pandemic are creating tremendous difficulties for countries that rely on exporting goods, creating inequality between countries (UNCTAD, 2020). According to the Prebisch – Singer hypothesis, economies that rely strongly on agricultural goods enter into a vicious cycle of economic decline because their low level of added value lowers the potential level of real GDP (Harvey *et al.*, 2010). This has been made worse by Covid-19 as the availability of skilled labour to produce them or to develop agricultural systems has been reduced. Thus, there may be a long-run decline in the terms of trade for countries that depend on natural resource exports. In addition, as migrant workers face large-scale job losses without any compensation or unemployment benefits, remittance inflows have shrunk significantly; they are projected to fall by more than 20%, cutting off a vital source of income for many disadvantaged households (World Bank, 2020b).

Furthermore, less economically developed countries (LEDCs) are the most vulnerable to Covid-19 due to having weak medical systems and an inadequate amount of protective gear. They also face inequalities in terms of testing capacity, quarantine facilities and access to vaccinations (Jensen & Molina, 2020). It can be harder to practice social distancing due to poor sanitation, overcrowded urban slums and overwhelmed transportation services. Moreover, their underdeveloped welfare systems also make it very difficult to support unemployed workers. On the other hand, more economically developed countries (MEDCs) can afford to protect their economies by spending more on healthcare, unemployment benefits, providing access to the internet and many more. Across countries, research has found that a 1% decrease in GDP is associated with a 1% increase in the Gini coefficient, leading to high-income individuals receiving much larger percentages of the total income of the population (Dasgupta & Emmerling, 2021).

#### Inequalities within countries

Inequalities between households are also increasing due to the poor getting poorer and the rich getting richer (Wałęga & Wałęga, 2021). Low-paid workers have suffered considerable losses in income, whereas middle and high-income earners remained almost unaffected (Gent, 2020). Due to the fact that many people who work in industries like construction, manufacturing, retail, tourism and hospitality are unable to work from home, significant barriers have been created between the rich and poor. According to Sostero *et al.* (2020), it becomes more feasible to work remotely as one climbs up the income ladder. Poor employees will therefore experience greater pressure, as pointed out by Tyson

and Lund (2021), to reallocate as they are over-represented in the sectors with less remote work potential. The wealthy, on the other hand, have been less impacted by the pandemic's economic shock as they typically work in tertiary or quaternary industries, where they have been able to transition to working from home, while saving money on commuting and leisure activities (France 24, 2021).

### **Employment sector inequalities**

Service sector jobs such as personal care, retailing, food and beverage, and transport services with the highest physical proximity are experiencing the most disruption as a result of the pandemic (Lund *et al.*, 2021). For example, in 2020 there were approximately 660,000 job losses in the UK's hospitality sector which accounts for 20% of total jobs (BBC News, 2020). Moreover, the informal sector, which is typically found in emerging and developing countries, employs some of the most vulnerable workers. They have suffered a disproportionate loss of income due to having limited social benefits and no 'safety net' to fall back on. Since these workers have low productivity and a lack of human capital investment, they are often excluded from short-term financial assistance schemes. According to ILO (2020a; 2020b), there are more than 2 billion people working in the informal sector globally and it is estimated that lost labour income will increase relative poverty for informal workers by almost 56% in LEDCs. Therefore, this could cause a decrease in school enrolment rates, especially for girls, increasing gender inequality.

### **Gender inequalities**

Women bear a disproportionate share of the burden as Covid-19 disrupts work and family life; they are more likely to lose their jobs than men and are also expected to take care of children due to the closure of schools and household roles at home (Fisher & Ryan, 2021). The effects of the economic shock impacted the sectors that are predominately delivered by a female workforce and were scaled back, suspended or abandoned during social distancing. However, services predominantly provided by a male workforce, such as the delivery of food and goods, may have expanded and benefited by increased demand as well as the availability of platform-based gig employment.

### **Education inequalities**

As most schools and universities have shifted to online learning, the use of digital technologies has significantly increased where lecturers conduct classes remotely and students submit their assignments electronically. However, the pandemic has exposed dramatic inequalities in technology access because almost half the world is still not online (Broom, 2020). This has caused the digital divide to widen, meaning children in low-income families don't have access to education; it is estimated that around 1.6 billion students are not attending school (Scott, 2020). Thus, individuals and society may incur permanent long-term consequences as a result of learning losses. If these disparities persist for a long time, the most disadvantaged students will face significant obstacles to development, decreasing their social mobility and hindering their skills development (Dabla-Norris *et al.*, 2015; Ingraham, 2018).

Due to financial losses suffered by poor households in developing nations, some may not be able to send their children back to school. This will consequently reduce the economy's productive capacity and long-term economic growth, further widening the gap between countries. Furthermore, Corak (2013) finds that nations with more income inequality tend to have lower levels of intergenerational mobility, with parent's earnings being a more important determinant of children's incomes.

### **Age-factor inequalities**

Younger people have been hit the hardest by this crisis as they are experiencing the brunt of the economic devastation (Gould & Kassa, 2020). Many job-oriented learning and internships, that enable smooth transitions from school to work, have been interrupted. This has caused joblessness among people aged 15 to 29 in OECD countries to increase by 2.9% from the end of 2019 to the end of 2020 (OECD, 2021). Excluding young people from the labour market is one of the greatest risks, as in the long run, the combined labour market and educational issue not only risks impairing jobs, but also further exacerbating existing inequalities in and among countries.

There is a well-established link between prolonged durations of unemployment and reduced employment prospects (Blanchard & Summers, 1986; Meyer & Phelps, 1973). The unemployed people may find it harder to find jobs in the future due to human capital depreciation and potential loss of experience. The longer they remain unemployed, the more they will lose out on training in new methods and technology. Additionally, the pandemic has also spurred automation and digitisation, which requires more skill-intensive labour. This has resulted in a mismatch between the supply of low-skilled workers and the demand for high-skilled workers.

All the above inequalities have an integrated effect on Women-owned SMEs and this paper provided a general overview of the situation and impact on SMEs in Vietnam which is discussed in the next section.

### **(b) Women-owned SMEs in Vietnam in the Covid-19 pandemic**

Small and medium-sized enterprises are particularly vulnerable to economic crises, especially with the unprecedented Covid-19 outbreak, and within the broader universe of SMEs, women-owned enterprises are even more exposed (Marjański & Sułkowski, 2021; Szostak & Sułkowski, 2021). There are discrepancies in terms of support provided and loan granted to women owned SMEs and such discrepancies are the product of documented biases, both conscious and unconscious. The government has introduced various sound policies, supportive regulations, and incentives for women-owned businesses to overcome this crisis period and provide support to recover in the new normal.

Small and medium-sized enterprises (SMEs) play a vital role in Vietnam's economic development and growth. SMEs accounts for 98% of all the enterprises in Vietnam as per estimation in 2015, which also contributes to approximately 40% of GDP. The government has framed number of reforms to support SMEs and especially women entrepreneurs. Vietnam has made an impressive progress in terms of women-owned enterprises in recent years. As per the report from Vietnam chamber of Commerce and Industry (VCCI), the proportion of women-owned businesses in 2011 was 21% which significantly increases to 31.3% in 2018 as per Mastercard Index of Women entrepreneur report. Vietnam was ranked 1<sup>st</sup> in Asia and 6<sup>th</sup> globally out of 53 economies. This certainly reflects the growth of women entrepreneurs in Vietnam and thanks to the state policies which have been helpful to promote the female entrepreneurship in Vietnam.

To narrow the gender gap in the economy, government had set to achieve the target of 35% of female owned enterprises by 2020. Vietnam was making swift progress towards that, but the pandemic had hit the entire world, and Vietnam was not an exception. The women-owned enterprises in Vietnam reduced to 26.3% in 2020, which was still second highest in the ASEAN region after Philippines with 27.1% and higher than rest of the countries in the regions such as Singapore, Thailand, Indonesia and Malaysia (Mastercard Index of Women Entrepreneur Report, 2020).

The Asian Development Bank (ADB) had received 20.2 million USD in 2019 from the Women Entrepreneur Finance Initiative (We-fi) to support approximately 5,000 women-led SMEs in Asia and the Pacific and recently in December 2020, ADB and Vietnamese government has signed a 5 million USD grant agreement funded by We-fi to support women entrepreneurs whose finance access has weakened due to the pandemic. This is a major initiative taken by the government to fully tap the women's capability as they contribute to a major part of workforce and this will enable to continue the economic growth of the country.

Further, the government of Vietnam took the quick measures during pandemic and placed a number of fiscal and monetary policies to support the SMEs such as delaying the tax collection, reducing the land rent by 15%, reducing the government fees and charges, lowering the interest rates by 2%, cutting administrative procedures and costs for entrepreneurs and credit limit expansion as per the report by the United Nations Economic and Social Commission for Asia and the Pacific (2020). The businesses which relied on cash flows found it most difficult to survive during the pandemic as they were short of finances to cover the basic operational cost and faced the shortage of working capital. But a smaller proportion of women-led SMEs surveys mentioned about shortage of working capital and most of their concerns were related to order cancellations. This suggests that women-led SMEs are more robust which also was supported by survey results of the report wherein women-led SMEs showed more optimism with 6%

saying that they believe that they will go bankrupt if Covid-19 lasted till the end of year 2020, while this figure was 10.5% for men-led SMEs who were more concerned about going bankrupt.

Despite the government's efforts in providing support to women-led businesses, the difficulties faced by women-owned enterprises continues to be existing in terms of financial constraints, lack of motivation, low levels of digital literacy, fear of failure, lack of family support as per the results found from various research studies conducted in Vietnam on women entrepreneurs.

The pandemic had added further to these difficulties where the female-owned businesses were more vulnerable than men-owned businesses which has been felt across Vietnam. As per the Mastercard Index of Women Entrepreneur report of 2020, 80% of the businesses owned by females were exposed to most impacted sectors as compared to 60% of male-owned businesses in Vietnam. The state support policies such as credit policy package, fiscal policy package, labour policy package was provided by the government to support the enterprises impacted due to Covid-19 but very few enterprises accessed these support policies as reported in the report by United Nations Economic and Social Commission for Asia and the Pacific (2020). It was reported that due to cumbersome procedures and lack of clear instructions, SMEs were unsure as how to use these support policies and the views were gender neutral for these issues.

Further, the report mentioned that despite all the challenges women entrepreneurs face, they have shown better resilience and have displayed better leadership skills in this pandemic crisis. Women entrepreneurs display better flexibility to adapt to changing business models, are willing to embrace technology to shift to the new business model and have also established women-led platforms to share, monitor and coach the young female entrepreneurs. Most of the women-owned SMEs operate in the service sector and are facing various obstacles to engage with different business activities due to short of resources such as lack of finance and inadequate knowledge and skill towards digital literacy. Women also face gender stereotypes issues from friends and family (UNW, 2021).

Recognizing that greater participation and parity for women in business is vital not only to economic recovery, but also to the societal and cultural advancement for all, hence it is important to understand the factors affecting women advancement in Vietnam (Maheshwari, 2021). Promoting women entrepreneurship contributes to socio-economic development of countries (Jamali, 2009; Verheul *et al.*, 2006). The rate of increase of women entrepreneurship, especially in developing countries, has created a positive impact on overall household welfare and consumption (Minniti&Naudé, 2010). Women's unique role in the household creates a network effect resulting in increased entrepreneurial activities (Datta & Gailey, 2012; Minniti, 2010). Entrepreneurship offers economic security to women (Itani *et al.*, 2011), provides them a platform for self-expression and fulfilment (Eddleston & Powell, 2008) and empowers them as individuals (Jamali, 2009). Despite the advantages identified as how promoting women entrepreneurs can help towards the countries growth, women still face lot of barriers towards their entrepreneurship journey. The study conducted in China by Ng and Fu (2018) reported that the factors that motivate women entrepreneurs are based on pull and push theory. The motivators identified are need for self-achievement, less job opportunities, desire for independence, dissatisfaction from employment, family responsibilities, and family business (Ng & Fu, 2018). The challenges found were lack of skills, funding difficulties, gender stereotype, and cultural barriers (Ng & Fu, 2018).

Across the world, entrepreneurial-minded women are determined to break into, and become a success in the competitive business landscape. However, the still dominant gender gap means these women continue to face challenges of disproportionate number and scale when compared to their male counterparts. According to the Mastercard Index of Women Entrepreneurs (2020), 31.3% of businesses in Vietnam are owned by women, placing Vietnam at the sixth position out of the 53 surveyed economies. Despite the prevalence of female entrepreneurship in Vietnam, little is known about the motivations, challenges, and success factors of those occupying this vibrant sector of the Vietnamese economy. The purpose of this study was to provide a general overview regarding future studies on female Vietnamese entrepreneurs' perceptions regarding the barriers they have been facing while being an entrepreneur during the Covid-19 pandemic.

## DISCUSSION AND CONCLUSION

In conclusion, inequality leads to economic instability in various areas as discussed above. Previous studies have found that income inequality negatively affects growth and its sustainability (OECD, 2014). Because the wealthy spend a smaller percentage of their income, they save more money as compared to middle and lower-income groups. Thus, increasing concentration of income leads to a fall in consumer spending, decreasing aggregate demand and slowing down economic growth (Carvalho & Rezai, 2016). This will lead to widespread, cyclical unemployment; globally around 200 million people are expected to lose their job, in particular women and young, unskilled workers by 2022 (UN News, 2021).

Individuals with low incomes may face challenges in paying fixed expenses, such as rent, and may be forced to borrow to maintain consumption. This may not be sustainable in the long run because they may not be able to repay their debt, leading to the inability to pay for basic necessities (The Conversation, 2016). Previous disasters have shown that economic consequences on the poorest households is larger and recovery is slower due to the loss of assets and human capital (Hill & Narayan, 2021). Consequently, welfare disparities are widened and the poor are trapped in a vicious cycle of poverty in the long run. The study in Ukraine suggested that there is a link between gender and the rights the entrepreneurs receive and it was found that women are not getting equal rights in enterprises and they have to face gender discrimination which is a threat to social and economic standing of a country (Bilan *et al.*, 2020) and this discrimination might have widened during this covid-19 era. Hence, it is important to focus on the case of Vietnam, especially when it is a growing economy with more than 70% of women in labour force participation.

There are several studies conducted in developed countries to determine the challenges faced by women entrepreneurs, but there is dearth of studies conducted in developing countries. Hence, as a theoretical contribution, this study will contribute towards the less explored region in order to understand the barriers faced by women owned SMEs. Only based on thorough understanding of what drives and inhibits women in business, as a practical contribution, the governments, policymakers, businesses and individuals would be able to support, inspire and foster women to progress further. Understanding the barriers might help the stakeholders to provide the appropriate support to women entrepreneurs which further can help in empowering the women in Vietnam and helping the economy to grow.

There have been various studies conducted in the past to study the barriers faced by women SMEs in Vietnam (Trang *et al.*, 2020; Zhu *et al.*, 2019) but rarely there are studies conducted to study the impact of Covid-19 on women owned SMEs. Hence, based on this general overview of the paper, it is an important research area to analyse the characteristics of women-owned SMEs and the obstacles they face while operating SMEs in Vietnam and the impact they have on their entrepreneurs during the Covid-19 pandemic. Assessing the situation and providing support to women entrepreneurs can help the country in dismantling barriers for women-owned SMEs and in turn will help achieve gender parity and also help in achieving sustainable development goals (SDG) #5 (Gender equality) and #8 (Decent work and economic growth). This study can be regarded as a stepping stone to such more studies in the future and this overview can be lay the foundation of such future studies.

Similar to any other research article, this article also has some limitations and implications for the future research. First, the article is about providing overview of impact of covid-19 on increased inequalities and its impact of women-led SMEs in Vietnam and does not present any empirical research. In future, the quantitative and qualitative research using survey or interviews can be carried out to provide robust results on this topic. Next, the comparative empirical research can be conducted either in different Asian countries or between developing and developed countries to see if the impact of Covid-19 is similar on women-owned SMEs. Further, longitudinal study can be conducted in the future after some years to see this post-Covid effect. Lastly, the exploratory study can be conducted in Vietnam to identify the motivation and the barriers which women entrepreneurs face towards their entrepreneurship journey.

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### Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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# Contradictions of institutional and economic environment: Experience of Kazakhstan

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## ABSTRACT

**Objective:** The purpose of the study is to assess the quality of economic growth in Kazakhstan. An attempt has been made to provide an analysis of the institutional and economic environment and an econometric assessment of the real indicators of the country's development.

**Research Design & Methods:** To assess the degree of influence of certain indicators on economic growth, a regression analysis was carried out. For this, data were collected from 15 countries for 2000-2018. Since the sample combines temporal and spatial data, a panel data regression model was built to analyze the effect of the considered explanatory variables on GDP. To study a model with these characteristics, two different models can be used: a fixed effects (FE) model and a random effects (RE) model.

**Findings:** Based on the historical and logical analysis of theoretical and methodological approaches to the study of economic development and the constructed regression model of panel data, it is shown that an increase in the level of indicators selected in official statistics has a small effect on economic growth, that is, there is a discrepancy between target indicators government programs and actual results. The institutional features of the Kazakhstani development model, which cause economic lag, are revealed.

**Implications & Recommendations:** The current cyclical transition, complicated by the Covid-19 pandemic, has revealed weak links in the economies of many countries, caused by systemic contradictions accumulated over 30 years. Kazakhstan, as a country that has been building market relations only since the end of the 20th century, found itself in the grip of not only economic and political, but also institutional costs. One of the problems hindering the economic development of the nation is the contradiction between the political ambitions of the authorities and the real results of the implementation of state programs, the loss of public confidence.

**Contribution & Value Added:** The country's development prospects are primarily predetermined by the state's ability to solve accumulated problems. Therefore, it is important to identify them, solve, and then predict the real parameters of the country's development. The importance of such a methodological approach is noted by scientists from the post-Soviet countries, who study the factors that hinder the development of these countries.

**Article type:** conceptual article

**Keywords:** business environment; institutions; institutional economics; new markets; real economic growth; social inequality; quality of life of the population

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## INTRODUCTION

For thirty years of sovereign development, Kazakhstan has become recognizable not only as country rich in natural resources, but also due to the achievements of talented youth at the world level in sports, culture, art, as well as ambitious statements of the authorities (Sansyzbayeva et al., 2020). The international community is convinced of the rich competitive opportunities of society and high human

potential. However, researchers cannot fail to notice the limited transformation of society's capabilities into competitive advantages of the state: the real socio-economic state of the country is "veiled" in official statistics. The results of many adopted state development programs of the country remain as expected. Most investments, including borrowed ones, do not pay off. The real transparency of decisions and the process of using budgetary resources are limited. The current institutional and economic environment has a contradictory impact on business development, and accordingly, entrepreneurs tend to behave opportunistically (Głodowska, Pera & Wach, 2016). A model of a simulated economy emerges. In the annual program documents, the country's leadership announces strategic tasks, the solution of which should ensure an increase in the quality of life of the population and the international competitiveness of the economy. The main arguments for optimism are the improvement of macroeconomic indicators and government support for business and the population at the expense of budget funds. At the same time, state authorized bodies also report on huge amounts of funds invested by oligarchs abroad, embezzlement of state budget funds.

The aim of the study is to assess the quality of economic growth in Kazakhstan. An attempt is made to provide an analysis of the discrepancies in expectations stated in government programs and real indicators of economic development in Kazakhstan.

The article is structured as follows. The first section of the Introduction reflects the relevance, purpose and significance of the study. In the second section, a literature review is conducted, where the difference between the concepts of "economic growth" and "economic development" is considered, as well as various methodological approaches to the study of problems of economic development are presented. The third part describes the methods and data used in the article. The fourth part presents the results of the study. And in the final fifth part of the article, conclusions and recommendations are presented.

## LITERATURE REVIEW

In connection with the emerging contradictions between the official indicators of economic growth and the real economic development of the country, it is necessary to clarify the difference between the concepts of "economic growth" and "economic development".

Economic growth is a quantitative indicator that reflects the dynamics of macroeconomic indicators (GDP, inflation, employment). This indicator does not reflect the impact of dynamic growth on the environment, health, birth rate, life expectancy, education, social security of the population.

Economic development is an indicator of the quality of life, reflecting the increase in national wealth, growth in the number and expected duration of life of the population, the availability of benefits for all, legal and environmental security of life, and social progress. The world scientific community and international organizations are studying this indicator, comparing its level in different countries (Kuznets, 1946). In the post-Soviet space, the issues of the quality of life are being actively discussed in connection with the ongoing systemic transformations in the political economy and the deterioration of the living conditions of the majority of the population (Balobanov & Golubev, 2011).

The origins of the theory of economic development come from the works of ancient thinkers: philosophers, economists, who studied the nature and factors of the wealth of peoples, the incomes of different social strata. Thus, Smith (2007), in his famous work "Research on the nature and causes of the wealth of peoples", foreseeing the physical poverty of the population in developing countries in the 21st century, "gives a lesson" to capital owners and government authorities on the distribution of the product and the determination of the minimum consumption basket of an employee: Man must always be able to exist by his labour, and his wages must at least be sufficient for his existence. Even in most cases it should slightly exceed this level; otherwise, it would be impossible for him to support his family, and the race of these workers would become extinct after the first generation. In this thought, we find an emphasis on the socio-demographic factor of economic development. Marx (2017) in the first volume of "Capital" developed it, defining labour as a commodity and proposing a formula for calculating its average daily value and a method for distributing new value to the worker's income and the capitalist's profit, which predetermined social stratification in a capitalist society.

In the 20th century, an impetus to the study of economic development and the role of the state in this process was given by American researchers – Arthur Lewis and Theodore Schultz – laureates of the Nobel Prize in 1979 for “innovative studies of economic development as applied to the problems of developing countries”. Lewis (2013) among the factors influencing real economic growth, considered institutional, associated with the existing forms of organization of a given society, with its political system and the nature of property relations. In his opinion, maintaining law and order is one of the main conditions for economic growth, and many societies fell into decay because the state was unwilling or unable to protect property owners from bandits or mobs. Schultz (1971) in his studies analyzed the reasons for the low quality of life in developing countries and the factors of the “economic miracle” of post-war Germany and Japan, substantiated that the prosperity of states wasn’t based on minerals and the wealth of banks, but on educated and healthy citizens. A significant contribution to the study of the role of institutionalism in technological transformation and economic development of the countries of the non-Western world was made by such outstanding economists as De Soto (2004), Nelson & Winter (2002), Stiglitz (1997), Todaro (1997).

In countries of an emerging market, a great contribution to the scientific school of institutionalists was made by Russian scientists such as Nureyev (2001) or Auzan (2011).

The different approaches of economic development researchers show that in this area there are many possibilities for choosing different goals.

To assess the level of economic development in the modern world, international organizations use integral measurement methods – indices. In 1979, an index of the physical quality of life was created. The Quality of Life Index is a combined indicator that measures the achievements of countries of the world and individual regions in terms of their ability to provide their residents with a prosperous life. The Index summarizes the results of subjective satisfaction with the life of citizens of different countries of the world and correlates them with objective indicators of the socio-economic well-being of residents of these countries. At the same time, the quality of life means the satisfaction of the population with their life and living conditions, based on their real various needs and interests. The Quality of Life Index is compiled on the basis of statistical analysis of nine key indicators that reflect various aspects of the quality of life of the population and is published annually within the framework of the United Nations Development Program to compare the level of economic development of countries around the world. Since 2006, the world began to define a new international measure of “Happiness” – “International Happiness Index”, which takes into account the dream and desires of most people on Earth to be happy and healthy, to live a long and fulfilling life. Since 2012, the UN Sustainable Development Solutions Network has been publishing the World Happiness Report. This is a global survey in which people are asked to rate how satisfied they are with life. In 2018, residents of 156 countries participated in it. Finland, Denmark, Norway, Iceland and Netherlands were included in the top five. Kazakhstan ranked 60th and second among the CIS countries after Uzbekistan (Tulekbajewa, 2019).

A new methodological approach to the study of economic development problems in order to achieve effective results of the implementation of government programs in improving the well-being of ordinary people was developed by Banerjee, Duflo and Kremer – the 2019 Nobel Prize winners in economics (Banerjee & Duflo, 2012). The prize was awarded “for an experimental approach to reducing global inequality”. Their research is aimed at microeconomic analysis, identification of population problems. Among the basic requirements for overcoming the above-mentioned problems, scientists single out: satisfaction of basic needs (food, no fear of losing income).

Research on the factors influencing the economic growth of a country was carried out in the scientific papers of Chlebisz and Mierzejewski (2020). They suggest that an increase in the share of exports of high-tech products can increase the country’s GDP and, as a result, have a positive effect on the growth of economic indicators.

Głodowska(2017) in the study attempts to substantiate the importance of supporting business environment development as a factor of economic growth in the country.

It is impossible to overestimate the role of the pandemic situation, which in many aspects affected the economic development of the world market. The negative effects of this phenomenon have been investigated by many scientists. Żak and Garncarz (2020) have identified an unprecedented decline in

economic activity in the Scandinavian countries. The experience of the Scandinavian countries subsequently can be taken into account in world practice.

## RESEARCH METHODOLOGY

In the course of the research, general scientific methods were used, such as observation, historical and statistical analysis, visualization and econometric modelling. To assess the degree of influence of certain indicators on economic growth, a regression analysis was carried out. For this, data were collected from 15 countries for 2000-2018. Since the sample combines temporal and spatial data, a panel data regression model was built to analyze the effect of the considered explanatory variables on GDP. To study a model with these characteristics, two different models can be used: a fixed effects (FE) model and a random effects (RE) model. The fixed effects model examines the relationship between a predictor and outcome variables within an entity and assumes that the explanatory variables are fixed in units of observation and that fixed effects are computed from the differences within each unit over time. And random effects model is usually preferred when it is assumed that missing variables are absent or not correlated with the explanatory variables considered in the model. Using this model allow to determine unbiased estimates of the coefficients, use all available data, and generate the smallest standard errors. A significant difference between fixed and random effects is whether the unobservable individual effect includes elements that are correlated with regressors in the model.

The general equation of the econometric model is as follows:

$$GDP_{it} = \alpha_i + \beta X_{it} + \varepsilon_{it} \quad (1)$$

where  $i$  represents the countries in the sample ( $i = 1, \dots, 15$ ) and  $t$  represents time ( $t = 2000, \dots, 2018$ ).  $GDP_{it}$  is the dependent variable and represents GDP.  $\alpha_i$  is the unobservable individual specific effect, and  $\beta$  is the vector of coefficients associated with the independent variables.  $X_{it}$  is a vector of explanatory variables for country  $i$  at time  $t$ .  $\varepsilon_{it}$  is the error value.

The dependent variable of the model is GDP, and the following were selected as explanatory variables: Life expectancy, Birth rate, Health expenditures, Education expenditures, Employment.

To assess the interdependence of variables, the Pearson correlation was estimated, which allowed to determine how proportional the variability of two variables. Correlation coefficients can be positive or negative. If an increase in one variable is associated with a decrease in another, then the correlation coefficient will be negative. A positive correlation is one in which an increase in one variable is associated with an increase in another variable.

All data used were collected from the official website of the World Bank and the Statistics Committee of the Ministry of National Economy of the Republic of Kazakhstan.

## RESULTS AND DISCUSSION

### Real GDP growth over the years of Kazakhstan's sovereign development

Since Kazakhstan, like all the countries of the post-Soviet space, was a dependent link in a single national economic complex, the collapse of the former Soviet Union led to the bankruptcy of the national economy. The country could survive in the first years of sovereign development only through the sale of natural resources. All subsequent years, the export of raw materials continues, maintaining the low quality of economic growth predicted by Stiglitz in the theory of the "resource curse" (Humphreys *et al.*, 2007).

The most important indicators of economic development are GDP per capita, birth rate, life expectancy, literacy and education, health care, employment, gender balance, free time.

To assess the impact of these indicators on economic growth, an analysis of panel data was carried out. The sample contains data for 15 countries of the former Soviet Union for 2000-2018. The dependent variable in the model is GDP, and the independent variables are life expectancy, birth rate, health and education expenditures, and employment.

Using the collected panel data, 2 regression equations with fixed and random effects were constructed. The general equation adapted to the sample is described by equation (2):

$$GDP_{it} = \beta_1 Lifeexpectancy_{it} + \beta_2 Birthrate_{it} + \beta_3 Healthexp_{it} + \beta_4 Educationexp_{it} + \beta_5 Employment_{it} + \alpha_i + \varepsilon_{it} \quad (2)$$

The results of econometric calculations performed using the STATA statistical software package with the dependent variable GDP are shown in Table 1.

**Table 1. Panel regression models with dependent variable GDP**

Independent variables	(1)	(2)
Life expectancy	0.066*** (0.007)	0.067*** (0.007)
Birth rate	0.062** (0.008)	0.058*** (0,0086)
Health expenditures	0.026*** (0.012)	0.026** (0.012)
Education expenditures	-0.026*** (0.0049)	-0.026*** (0.005)
Employment	0.009* (0.005)	0,011** (0.005)
Cons	4.353*** (0.445)	4.318*** (0.549)
Individual effects	FE	RE
Number of observations	203	203
Fisher test for significance coefficients	F(5, 183)=105,24 [0.0000]	
R-squared	0.742	
Wald statistics		Chi2(5) =479.58 [0.0024]

Notes: 1) \*, \*\*, \*\*\* – the significance of the coefficients at 10%, 5% and 1% levels, respectively;

2) FE – fixed effects, RE – random effects;

3) F-test for the significance of individual effects: F(14, 183) = 945.57, Prob > F = 0.0000; Hausman test: Chi2(5) = -8.24, chi2<0.

Source: own study.

The second column of the table shows the results of the panel data model with fixed effects using the least squares method, and the third column shows the results of the panel data model with random effects using the least squares method.

Coefficients of the variables Life expectancy, Health expenditures, Education expenditures presented in Table 1 are significant at the 1% level. The coefficient of the variable Birth rate is significant at the 5% level, and the coefficient of the variable Employment is significant at the 10% level. According to the results, the evaluated panel data regression model with fixed effects is statistically significant, as evidenced by the rather high coefficient of determination  $R^2 = 0.742$  and the Fisher test. In calculations for panel data with random effects, the Wald statistics Chi2 (3) serves as an indicator of the quality of the estimated models instead of the coefficient of determination. Its value given in Table 1 confirms the statistical significance of panel regression with random effects.

The F-test confirms the presence of individual effects. Since the set of countries included in the study is the same for all years, it is generally recommended to use a panel regression model with fixed effects. The Hausman test was performed, which confirmed the preference of using a panel data model with fixed effects over a panel data model with random effects.

The equation of the estimated model is as follows:

$$GDP_{it} = \frac{0,066 \cdot Lifeexpectancy_{it}}{(0.007)} + \frac{0,062 \cdot Birthrate_{it}}{(0.008)} + \frac{0,026 \cdot Healthexp_{it}}{(0.012)} - \frac{0,026 \cdot Educationexp_{it}}{(0.0049)} + \frac{0,009 Employment_{it}}{(0.005)} + \frac{4,353}{(0.445)} + \varepsilon_{it} \quad (3)$$

As expected, increases in Life expectancy, Birth rate, Health expenditures and Employment contribute to economic growth. The result of econometric analysis showed that 1% increase in Health

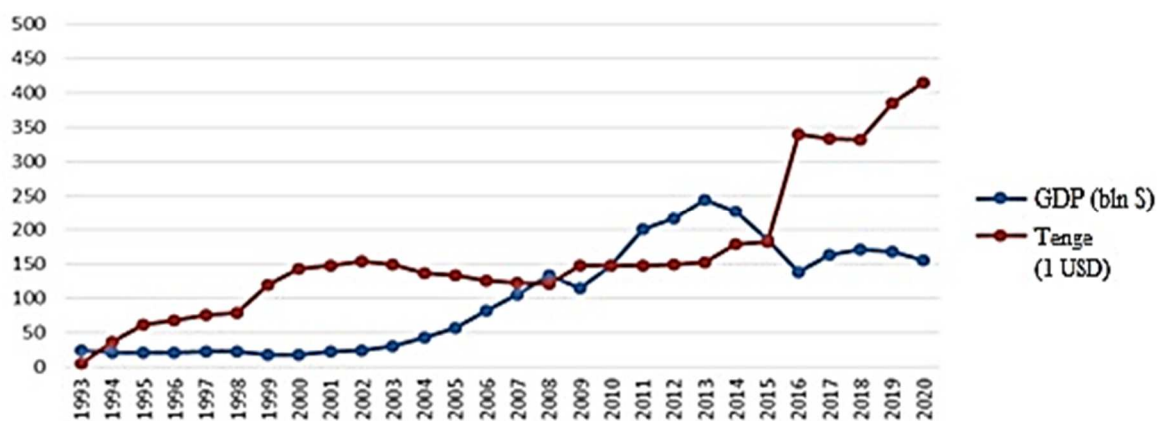


expenditures will lead to an increase in gross domestic product by 0.026%, and as a result of a 1% increase in Life expectancy, GDP will increase by only 0.066%, and the estimates of the coefficients of these variables are significant at the level of 1%. Also, GDP will increase by 0.009% with 1% increase in Employment.

All these indicators reflect the quality of life and well-being of the population; as a result of the analysis of panel data, it can be concluded that social support measures from the state and measures aimed at ensuring employment of the population do not have the desired effect and contribute to economic growth to a very small extent.

The methodological basis for assessing the quality of life of the population is the reliability of the analyzed indicators and an objective analysis of the social environment.

A comparative analysis of macroeconomic and socio-political indicators testifies to the contradictions of economic development in Kazakhstan. So, according to the Committee on Statistics of the Republic of Kazakhstan and the World Bank, there is an increase in the value of GDP in 2020 compared to 1993 by 7.3 times, with a decrease in the value of the national currency against the US dollar by 63 times. Figure 1 reflects the gap in the dynamics of changes in the value of GDP and the price of the national currency.



**Figure 1. Dynamics of the value of GDP and the exchange rate of the national currency in Kazakhstan for 1993-2020**

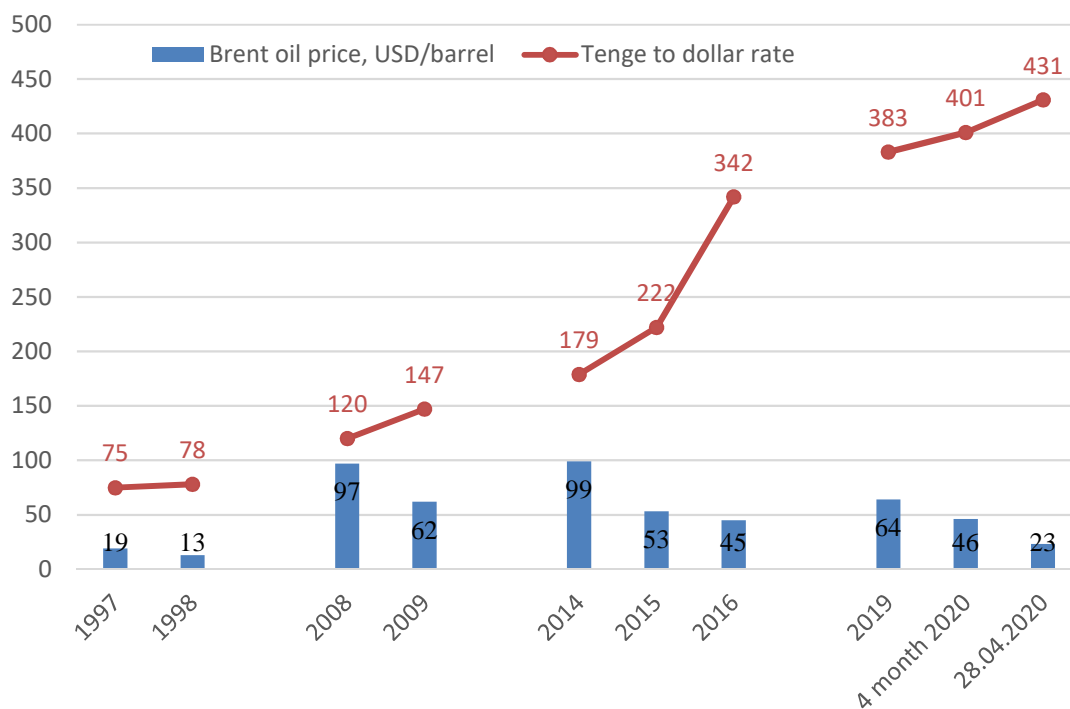
Source: own elaboration.

Figure 1 shows the outstripping rate of depreciation of the national currency, which reduces the real incomes of the country and the population – basic indicators of the quality of life in society. Under the influence of the volatility of oil prices, the national currency is getting cheaper, and during a pandemic it rapidly devalues, provoking an increase in the consumer price index for food, a decrease in the purchasing power of consumers, a drop in demand and bankruptcy of small, medium and large businesses. The following figure shows the interdependence of the tenge exchange rate and oil prices during the crisis years.

Figure 2 shows that GDP growth rates directly depend on the level of oil prices. The rapid increase in oil price volatility was observed during the 2008 financial crisis, when the indicator fell by 36%, while the tenge fell by 22.5%. A similar situation was observed in 2015, when the fall in oil prices reached 54.5 percent, which resulted in the devaluation of the tenge by 91%. The COVID-19 quarantine crisis was accompanied by record drop in oil prices by 64% and 12.5% decline in the national currency. Having analyzed the dynamics of the GDP level during the crisis years, it can be concluded that dependence on oil prices impedes a stable proportional GDP growth. The decline in GDP primarily indicates a drop in entrepreneurial activity and a weakening of the economy, since at least 70% of Kazakhstan's incomes are large businesses and SMEs.

It should be noted that even without numbers, it is clear that the counters of shopping centers reflect the dominance of imported consumer goods. The first market transformations of the political economy of the country led to the complete bankruptcy of enterprises producing the final consumer product. The liquidation of collective and state farms in the early years of the transition to a market economy led to the loss of the natural basis of industrial production of all consumer goods. At the same

time, 70% of the backbone enterprises in the extractive industry were privatized with a high share of foreign investors. The dependence on imports of investment and consumer goods does not allow the country to get out of the rut of the catching-up economy. New industrial plants are being built and commissioned, but the batch production process remains in “standby” mode.



**Figure 2. Dynamics of the tenge exchange rate and oil prices during the crisis years**

Source: own elaboration based on data from National Bank of Kazakhstan (2020) and International Energy Agency (2020).

**Social development indicators**

Today the quality of life is interpreted as the ability of a person to work and use income for self-development and providing the family with vital benefits that satisfy the needs according to Maslow’s hierarchical model of needs.

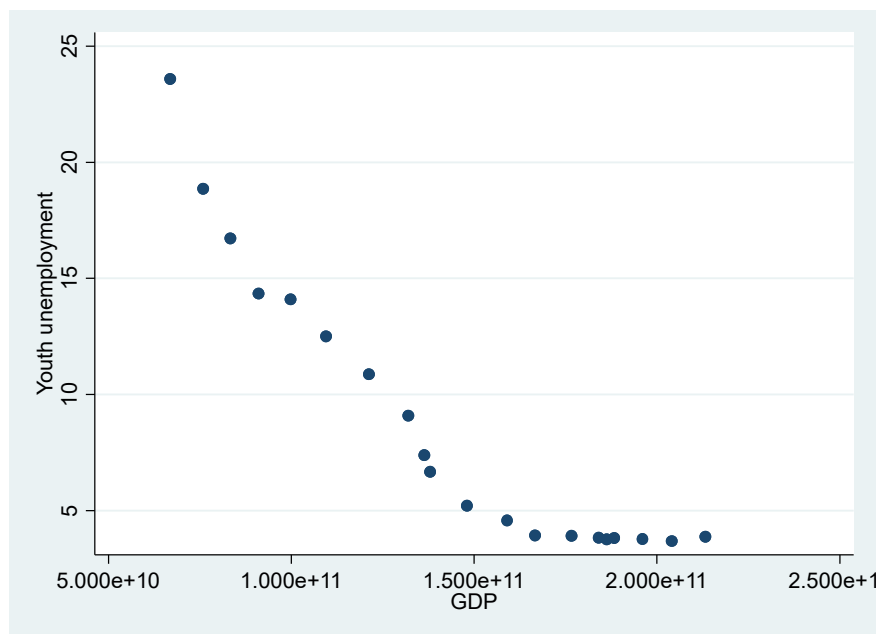
Official statistics and research indicate a growing outflow of talented and promising young people abroad, a decrease of the population’s literacy level and young people’ employment by their specialty, growing social stratification, and a low quality of the new working places. This, in turn, leads to a decrease in GDP and economic growth rates.

To clarify situation it is advisable to consider how youth unemployment affects the country’s GDP. For this purpose, the correlation dependence between these variables has been estimated for the last 20 years in Kazakhstan (Table 2).

**Table 2. Correlation between GDP and youth unemployment in Kazakhstan, 2000-2019**

Variables		GDP	Youth unemployment
GDP	Pearson Correlation	1	-0.934***
	p		0.000
	N		20
Youth unemployment	Pearson Correlation	-0.934***	1
	p	0.000	
	N	20	

Source: own study.



**Figure 3. Scatter diagram between variables**

Source: own elaboration.

Table 2 shows that the correlation between GDP and youth unemployment is very strong and significant at the 1% level ( $r = -0.934$ ,  $p < 0.01$ ), but it should be noted that there is a negative relationship between these indicators, that is, with an increase in one indicator, second decreases. The inverse relationship is clearly reflected in Figure 3. That is, due to the problem of youth employment, the country's GDP decreases.

In Kazakhstan, the unemployment rate in the second quarter of 2020 reached 5%. According to IMF forecasts, unemployment in Kazakhstan will reach 7.8% by the end of 2020; during the quarantine period, the share of unemployed reached 49,8% of the total labor force (Bocharova, & Seyit, 2020). The minimum salary for wage earners in a small business is 42500 tenge (about 100 USD).

In 2020, SMEs provided 30.8% of GDP and provides employment for 3.3 million people (37% of the total employed population) (Kapital, 2020).

Among those employed in small and medium-sized businesses, the share of individual entrepreneurs amounted as 65.6%, legal entities of small business – 18.5%, peasant farm holdings – 15.7%. The share of medium-sized legal entities – 0.2% (Kursiv, 2018).

The state is taking measures to support business, introducing a preferential tax regime and ban of financial audits. However, raiding continues while the business infrastructure is not improving. Thus, the total amount spent on the introduction and implementation of the development of innovative entrepreneurship programs for the period from 2005 to 2020 is more than 900 billion tenge. Summing up the results on the reforms effectiveness that form the trajectory of the state innovative development, it was revealed that the main strategically important points for the further innovative development of the state were not met, which indicates the ineffectiveness of industrial policy. According to the recommendations of the World Bank, Kazakhstan needs to revise the existing ineffective programs to stimulate the development of entrepreneurship and to close those that are not working (Regnum, 2020).

It should be noted that during the privatization in the agrarian sector of the economy, the best lands were withdrawn from farmland. As a result, farmers are deprived of agriculture areas and pastures sufficient for livestock, equipment and fertilizers are not available due to limited income. Naturally, in such conditions, superficial measures of state support do not achieve the intended effect. Small business grows for survival. The response of the poor is manifested in opportunistic behavior: a deliberate deterioration in the material and financial conditions of life in order to obtain social support, an increase in shadow incomes, etc. Social payments to families with many children

are accompanied by the social environment deterioration, the absence of a trusting dialogue between the state and society. There is an increase in property stratification.

The current economic crisis caused by the COVID-19 has significantly affected the economic situation in most countries of the world, having an impact primarily on small and medium-sized businesses, whose share in OECD countries is 50-60% of GDP and provides 60% of employment, in Kazakhstan the share of SMEs is 30.8%. The consequences of the quarantine had a negative impact on the business sector, which is the driver of economic development in Kazakhstan. The government of Kazakhstan has applied a number of instruments to support small and medium-sized businesses, among which the most used according to the results of a study by the auditing company Ernst and Young (EY): deferred tax payments, suspension of payments on loans to financial institutions.

Also, according to the results of the EY study and the survey conducted on the effectiveness of public policy measures, it was revealed that 15% of the surveyed SMEs could not take advantage of the concessions, since the supporting measures did not apply to their field of activity, which indicates the fragmented nature of state support. A certain share of SMEs remained unattended by the state. More than half of the respondents noted significant barriers to obtaining support for their business, including: low availability of information, bureaucracy, negligence on the part of operators (Ernst & Young, 2020).

To increase the role of SMEs in the economy of Kazakhstan, taking into account the state's desire to increase the share of entrepreneurship in GDP, it is necessary to increase the incentives and motivation of the population in order to increase labor productivity, as well as to create measures for a qualitatively new level of development of entrepreneurship, in particular innovative business, due to the technological transformation of the state.

One of the most important reasons for the failure of domestic programs, according to experts, is the incorrect formulation of measures that do not reflect specific measures to achieve the stated goals, the lack of control over each stage of project implementation, and the transparency of reports.

The key indicator of increasing the welfare of Kazakhstanis, according to the official statements of the government, is the growth of incomes of the population, but this does not take into account the fact that income withdrawals in the form of high bank interest rates are hidden behind the benefits acquired by the population through consumer loans. The provision of the population with housing is growing due to bank loans to the population, but the number of guaranteed high-quality jobs and sufficient income does not increase, which is a risk factor for loan default. The paradox is that bank services are becoming more expensive, and its stability is questionable, and in the event of a periodic default, the state pays off bank debts at the expense of the People's Welfare Fund. In 2017, bad loans reached 70% of the total volume of consumer and mortgage loans in the loan portfolio of commercial banks. In order to "rescue" the backbone commercial banks in 2017, more than 6 billion US dollars were spent from the National Welfare Fund of Kazakhstan (Masanov, 2018). The misuse of the national fund is taking place against the growing social stratification. In 2017, the share of the richest 20% of Kazakhstani people in the total income of the nation was 37.40%, and the poorest 20% – 9.80%.

It turns out that "everything seems to be fine, but the confidence of the country's citizens is not seen in the future". The trust of society and business to the state and the economic romanticism of the first years of sovereign development are permanently declining. It is known that without public will, all reforms remain "on paper". This raises the question of whether the reformers are aware of which economy the state creates, real or imitated, and what are the social consequences of economic policy.

The real situation in the life of Kazakhstanis is reflected in the results of modernization of healthcare and demographic problems. So, according to the Agency for Statistics of the Republic of Kazakhstan, current expenditures on health care increased by almost 2.5 times from 594.9 billion tenge in 2010 to 1 trillion. 604.2 billion tenge. However, in the country, children under 5 still die prematurely for reasons that could have been prevented. Most children die in the first year of life (in 2016 – 68.4%). So, out of 4799 children under the 5 years old, 3719 did not live to be 1 year old (Sputnik, 2017).

According to the results of 2019, the infant mortality rate in Kazakhstan increased by 5.9 percent, there are 8.4 deaths per 1000 children born. Kazakhstan ranks second among the EAEU countries in terms of mortality among children under 5 years of age (Kursiv, 2019). Another sad indicator of the

level of social development in Kazakhstan is the increase in suicide. In 2016, there were 1756 suicides. An alarming symptom of the psychological state of society is the increase in suicide among young people. According to the Statistics Committee of the Republic of Kazakhstan (2020), in 2017, 818 suicides were registered among young people aged 14 to 28 years old. In terms of the number of child and adolescent suicides in the European Region, it is in 7th place. Government officials say the reasons for the suicides are not known. However, observations show that teenage suicide is committed mainly by children from disadvantaged families. One of the reasons is the growing gap between the rich and the poor, the growing social poverty, there is an increase in the number of dysfunctional families in which adolescent children realize the hopelessness of their situation, do not see the prospects for their lives and decide to commit suicide.

Most of all suicides are committed by persons aged 35-44 due to material despair – 899 (in 2015 – 775), of which men – 755 (in 2015 – 652) and women – 144 (in 2015 – 123). Adults of working age, whose psyche is oppressed by the debt burden and insolvency, see suicide as the solution. The scale of this phenomenon is growing, it was isolated cases earlier, even in the difficult years of “shock therapy” in the economy.

According to the Prosecutor General’s Office, for seven months of 2020, five of which fall during the quarantine period, 2010 people committed suicide. According to the assumptions of psychologists, the reason could be a difficult financial situation and loneliness (Loginova, 2020).

The growth in incomes of the population declared by government officials does not take into account that built houses without amenities, worn out cars and small businesses are all purchased on credit, the return of which could never happen due to the lack of permanent income or improper credit agreements (Al’bekova, 2018).

#### **Dependence on the Past Trajectory of Development and the Institutional Traps of New Market States**

Methods of observation, formal deductive modeling, analysis of information from social networks were used in the research. In our opinion, institutions that are immanent to countries that have survived for many years the costs of a centralized administrative-command system, which resulted in the disintegration of the single Soviet national economy, are especially important in this study. Market transformation reforms were carried out without taking into account the peculiarities of the political structure of the one-party system and the psychology of the slave population, and representatives of power structures who monopolized the privatization process and distributed the former public property among a limited circle of former state and economic leaders. Since the countries of the post-Soviet space began to integrate into the world economic system in the end of the 20th century, i.e. when the whole world had a centuries-old market history, in our opinion, it is advisable to classify them as new market countries.

Dependence on the previous trajectory of development led to a low level of adaptive efficiency of the system. The institutions of power and property acquired new, market-democratic forms, but there were fewer real positive changes than negative ones. The new owners did not realize that the growth of the economy they had privatized was linked to labor productivity, which, in turn, could be increased by motivated labor. The worker became hired, but the wages did not match the value of his labor. The owners of enterprises, trying to “squeeze” as much profit from production as possible, reduced costs, dooming the economy to gradual bankruptcy.

In the economy, this situation has become a pattern. As a result, the domestic economy fell into decay during the first decade of market transformation. Revenues from the sale of natural resources were used to support economic and political stability. At the same time, extractive industry enterprises were privatized with the participation of foreign investors. The share of Kazakhstan in this case ranged from 8 to 18 percent. The contracts were signed on conditions dictated by the IMF and other international organizations that lobbied for the interests of TNCs. There was no one to challenge and defend the interests of Kazakhstan: there was no competent body in the field of foreign economic activity.

An important institutional feature in the management style of the administrative-command power structures, which has become ingrained in the minds of the “new” leaders, is the setting of ambitious tasks and the ability to report on desired achievements. In modern public administration,

this legacy is manifested in an ambitious desire to be “ahead of everyone”, imitation of high achievements. It is necessary to distinguish between adequate and unrealistic ambitions. Adequate correspond to the capabilities of a person, society, they are real. Therefore, they always bring a positive result, that is, satisfaction – a person and society fulfill the set goal and feel socio-economic and political improvements in life (Sorokin, 2019).

Adequate ambition is real and is perceived positively by others. Unrealistic ambitions of the authorities can cause extremely negative emotions in society. Real ambitions are built on the capabilities and trust of the authorities and society. In this case, a social additional productive force may arise, which is capable of producing a super-perceived positive effect. When manipulating numbers that hide corruption, nepotism, raiding, promises and beliefs about a “bright future” evoke a negative reaction and protest in society.

## CONCLUSIONS

To assess the degree of influence of factors reflecting the life quality of the population, a regression analysis of panel data was carried out. As a result of the econometric assessment, it was revealed that, in fact, an increase in these indicators has a small effect on economic growth. This result reveals a discrepancy between the target indicators of state programs and actual results.

Taking into account the peculiarities of Kazakhstan development as an emerging market country, it is important to define the principles of economic policy strategy and tactics.

First, we should refuse to “directly” copy the experience (not to be confused with the exchange of experience) of the historical prescription of other states. If Kazakhstan continues to move along the beaten path of more developed countries, it will remain in the rut of “always catching up with countries.”

Secondly, it is necessary to openly accept the challenges of modernity, the processes of globalization with all its internal contradictions and use the accumulated potential, including intellectual, own competitive capabilities, both in the system of production factors and in the system of economic relations.

Thirdly, it is necessary to overcome innovative passivity and take into account that economic growth is the ability of multiplicative growth of all sectors and spheres of the economy. So, if in countries of a developed market, innovative activity is increasing at the expense of satellite enterprises, on which new commercial products are tested, taking into account domestic and external demand, then in Kazakhstan in 30 years there is no single large competitive industrial production with a network of venture enterprises has been created.

Fourthly, when developing models of constructive actions, one should proceed not only from the language of numbers, but to a greater extent from economic logic, understanding of cause-and-effect relationships, social and economic dependencies. The growth of labor productivity should not lead to a reduction in free working time, a deterioration in the way of life due to excessive intensity and duration of work, discrimination against women and youth, or to demographic problems. Consumption growth should not burden future income if there are no prerequisites for stable employment and sustainable income growth.

Fifth, the priority factor of economic development in the conditions of modern technological transformation is knowledge and competence, the quality of the social environment. Decent education is an indicator.

It is known that any purposeful human activity begins with an abstract representation of the image of what is being created. As the research methodology teaches: if you do not build in your mind what you create, how can you find out whether you have created it.

In this regard, the question arises as to whether the state administration has an idea of what kind of economy society creates: imitated or real, what it heals and what it adapts to.

It seems that in order to develop a concept for the development of a national economic system, knowledge should be drawn from the scientific heritage, the effective experience of foreign countries and a common understanding of goals and opportunities. Based on them, to form a “structure” around which to build all the elements of the system under construction, taking into account the accumulated

production, economic and intellectual potential, institutional characteristics, as well as the responsibility of specific executors and controlling persons.

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### Conflict of Interest

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# Artificial intelligence in the curricula of postgraduate studies in financial management: Survey results

Mariusz Andrzejewski, Patryk Dunal

## ABSTRACT

**Objective:** The aim of this article is to determine the awareness, preferences, significance, and effectiveness of application of artificial intelligence (AI) among participants of postgraduate studies in the field of financial management.

**Research Design & Methods:** The pilot study was conducted with the use of a survey, and the findings were analysed using the Importance-Performance Analysis (IPA) method. The survey group was composed of individuals working on final projects developed within the framework of postgraduate studies in finance management, carried out in collaboration with e.g. ACCA, CIMA, CFA.

**Findings:** The obtained findings have identified a demand for the incorporation of knowledge in the field of AI in the process of education in the area of finance management. The survey results will be used to modify the content of the curricula adopted for postgraduate studies in the field of finance management.

**Implications & Recommendations:** The only chance for experienced professionals and managers to gain knowledge about AI is to enrol in postgraduate studies. The existing postgraduate curricula are flexibly modified, which makes it possible to incorporate the knowledge about state-of-the-art IT solutions and AI on an ongoing basis. This requires, however, permanent research into the needs of the developing market.

**Contribution & Value Added:** The progressing digitalisation in the socio-economic sphere of our life translates into huge amounts of data being transmitted, collected, and stored, and calls for a need to implement new technologies and solutions utilising techniques and algorithms based on artificial intelligence (AI). The SARS-CoV-2 pandemic has increased the demand for modern IT solutions in the field of e.g. finance management.

**Article type:** research article

**Keywords:** artificial intelligence (AI); education in financial management; curriculum in postgraduate education

**JEL codes:** M41, A23, C88

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## INTRODUCTION

Artificial intelligence (AI), defined as a field of science dealing with solving effectively non-algorithmic problems based on computational methods, is gaining in significance in the age of progressing digitalisation in the socio-economic sphere of our life (Sieja & Wach, 2019). The research problem addressed in the article is the need to incorporate elements of AI in the curricula of postgraduate studies in the field of finance management. Accounting education is gaining its importance in the modern business and present day global economy (Grabiński & Wójtowicz, 2019). To this end, a set of curricula adopted for ACCA (The Association of Chartered Certified Accountants), CIMA (The Chartered Institute of Management Accountants), and CFA (Chartered Financial Analyst) postgraduate programmes has been analysed and confronted with the perspective of individuals working

on final projects developed within the framework of these postgraduate programmes, being also finance management specialists by profession.

Experienced managers, having the biggest influence on the rate and the direction of development of organisations, are aware of the growing importance of AI. When they were still in education, they didn't have an opportunity to learn about AI, and now, the only chance to acquire this knowledge is to pursue additional forms of education, including postgraduate studies. It is true that the curricula of postgraduate studies are much more flexible than those adopted for traditional studies (bachelor's, engineering, master's degree-level). Many universities include postgraduate studies in their portfolios. They adapt their offering to the needs of the labour market and the current developments in the socio-economic domain of reality. This requires continued research in the domain in question.

The aim of this article is to determine the awareness, preferences, significance, and effectiveness of application of AI among participants of postgraduate studies in the field of finance management. The survey group was composed of individuals working on final projects developed within the framework of postgraduate studies in finance management, carried out in collaboration with e.g. ACCA, CIMA, CFA.

### RESEARCH METHODOLOGY

The pilot study was conducted with the use of a survey, and the findings (n = 48 responses) were analysed using the Importance-Performance Analysis (IPA) method. The survey group was composed of individuals working on final projects developed within the framework postgraduate studies in finance management. The survey form consisted of 12 questions divided into four main sections encompassing the perceived awareness, effectiveness, and importance of AI in finance management and the preferences regarding the application of AI in finance management and in education in the field of finance management. The survey considered the following AI tools: genetic algorithms (Sun *et al.*, 2008), automatic programming, fuzzy logic (Klement & Slany, 1993), expert systems (DeCarlo & Rizk, 2010; Sanchez *et al.*, 2016), neural networks (Jiang *et al.*, 2018; Kardan *et al.*, 2013; Kose & Arslan, 2016; Rau, Sen & Zhu, 2019), logical reasoning (Dai *et al.*, 2019; Zhou, 2019), intelligent software agents.

IPA has been suggested as a technique used to design business strategies (Martilla & James, 1977). It is based on the measurement of the significance of features/qualities (importance) and on their 'materialisation' in the target product (performance). The values obtained are entered into a diagram called action grid (Biletska *et al.*, 2010). Depending on which quadrant of the matrix a given factor is found, its significance for management may differ (Dawes & Patterson, 1987; Graf, Hemmasi & Nielsen, 1992):

1. Focus here (high importance, low performance);
2. Keep up the good work (high importance, high performance);
3. Low priority (low importance, low performance);
4. Possible overkill (low importance, high performance).

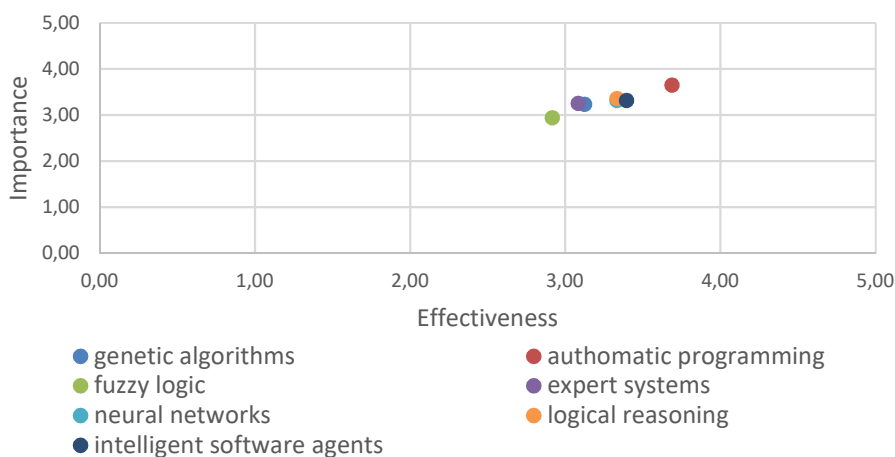
### RESULTS AND DISCUSSION

The findings of the conducted survey show a low level of awareness in the field of utilisation of artificial intelligence (40% of the respondents' answers). The best known AI tool is automatic programming (44%). According to the surveyed respondents, the three main areas where AI is used are: customer service (63%), business process automation (60%), and payment and settlement services (60%). The respondents claim that the greatest advantages resulting from the application of AI: reduction or elimination of manual labour (69%), better use of resources (60%), and reduction of operating costs (60%). As for the threats underlying the application of AI, the respondents name most often: losing jobs (58%), loss, theft, interception, and misuse of data (56%), and taking control over vulnerable systems found in remote, poorly supervised locations (54%).

Among the areas where the use of AI is desirable and most preferred, the respondents have named: business process automation (52%), payment and settlement services (44%), and reporting (38%). The AI tools whose application is most preferred appear to be: automatic programming (48%), neural networks (27%), and logical reasoning (23%). An interesting thing to notice is that as many as

33% of the surveyed respondents have no preferences regarding AI tools. It needs to be stressed that according to the majority of respondents (52%), elements of knowledge concerning AI are not covered within the framework of postgraduate studies in the field of finance management, or the respondents have no knowledge of it (44%). Here, the preferences are clear: as much as 81% of the respondents have claimed they would like to see elements of knowledge about AI covered during classes taught as part of postgraduate studies in finance management.

According to the respondents, the highest-performing areas in the field of utilisation of AI are: business process automation (58%), payment and settlement services (40%), and reporting (27%). The most important areas where AI is used have been said to be: business process automation (69%), reporting (33%), and payment and settlement services (31%). The results of the IPA analysis are shown in Figure 1.



**Figure 1. Results of Importance-Performance Analysis (IPA)**

Source: own elaboration.

The obtained findings have identified a demand for the incorporation of knowledge in the field of AI in the process of education in the area of finance management. The awareness in the field of the use of AI is little. The classes taught as part of postgraduate studies in finance management do not offer elements of knowledge about AI tools used currently in finance management, and those working on their final projects within the framework of postgraduate studies in finance management, being the survey sample in this research project, claim to be willing to see such elements being incorporated into the curriculum.. The IPA analysis, conducted on the basis of the average assessment values given to particular AI tools, has shown that these tools belong to quadrant B, suggesting a continuation of the current course of action (“Keep up the good work”) – high importance and high performance.

## CONCLUSIONS

The survey results will be used to modify the content of the curricula adopted for postgraduate studies in the field of finance management, which need to include elements of knowledge about AI. The goal will be achieved by the introduction of a subject called “Artificial Intelligence in Finance Management”, taught by two teachers: an expert in the field of AI and an expert in the field of finance management, and the adopted teaching method should focus on a case study analysis that would make it possible to present and discuss the tools in current use – using practical examples. Considering the dynamics of changes taking place in the domain of AI, the authors of this article call for an establishment of a bank of examples of application of AI in finance management, which will include formalised descriptions of cases where AI supports the processes applied in the area of finance. The bank in question could make use of features similar to those offered by ALEKS (Assessment and Learning in Knowledge Spaces) (Matayoshi *et al.*, 2019). It should be available to the public and updated on an ongoing basis with new solutions, and grant its users the right to use the featured solutions for teaching purposes.

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