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From the Editors

The first article aims to examine whether inflows of foreign direct investment (FDI) enhanced export performance in European transition countries during the period 2000 to 2015. The study suggests that European countries in transition develop strategies that improve the level of infrastructure, human resources and governance, and the business environment. The results suggest that government policymakers should pursue a course of action that leads to institutional improvements, provides more incentives for foreign companies and implements new and appropriate reforms to attract more FDI inflows, which in turn leads to higher export growth.

The second article explores the relationships between work-related psychosocial risk factors and the mental health of care workers. The results show that the work environment influences the mental health of care workers. Psychosocial hazards, such as low quality of management, lack of staff, role conflicts, low dedication among workers, physically and mentally challenging work and stress at work are prevalent in the healthcare sector. The study suggests that the management of safety issues should be proactive and oriented towards preserving the health of the employees and offering patient-centred services.

4 The aim of the third article is to review entrepreneurship education projects and their impact based on Gibb's entrepreneurship education framework including entrepreneurial behaviours, attributes and skills (BAS) and using a large questionnaire survey, interviews and workshops with project participants. The article contributes to providing a methodology for the systematic evaluation of EE based on the BAS framework, creating a systematic EE path for different school levels and offering recommendations for teacher training.

The aim of the fourth article is to identify the activities and roles of HR managers in Estonian organizations based on Ulrich's HR model, and analyze the determinants influencing HRM practices in organizations in strategic and operational terms, and the people and process-oriented dimensions. The results of the study reveal that the role of HR managers and their activities depends on the size of the organization, the people who are responsible for HR activities and the attitudes of top managers towards HRM. The results provide theoretical implications for the context-bound understanding of HR managerial roles and activities and offers practical guidelines for developing effective HR strategies and practices within the organization.

In this issue, the rate of acceptance for submissions was 45%. We are grateful to all the authors who submitted papers to our journal, and we are very thankful to the external reviewers for their kind assistance to the Editorial Board in the paper review process.

On behalf of the Editorial Board,

Urve Venesaar
Editor-in-Chief

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Does FDI Inflow Accelerate Export Performance in Countries in Transition? An empirical analysis of European Countries in Transition

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Abstract

The main objective of this study is to examine whether inflows of foreign direct investment (FDI) enhanced export performance in European transition countries during the period 2000 to 2015. For this purpose, we employ different econometric techniques including models of fixed effects, random effect, the Hausman-Taylor instrumental IV, and the generalized method of moment system (GMM). The findings show that FDI inflows had a positive effect on export performance in European countries in transition. Other factors that show positive effects on the level of export are investments (gross capital formation as a percent of GDP) and the trade liberalization index (TLI). The factors that show a negative effect regarding exports are real GDP and the real exchange rate (RER). The study suggests that European countries in transition develop strategies that improve the level of infrastructure, human resources, governance and the business environment. Since FDI inflows have a positive effect on the level of export, the results suggest that government policymakers should pursue a course of action that leads to institutional improvements, provides more incentives for foreign companies, and implements new and appropriate reforms to attract more FDI inflows, which in turn lead to higher export growth.

Keywords: FDI, trade, transition countries, dynamic panel data

JEL Classification: E2, F1, F2

1. Introduction

Numerous empirical studies have examined the relationship between FDI inflows and export performance. Most previous studies have found that FDI inflows have a positive effect on export growth in the host countries (Ahmadi & Ghanbarzadeh, 2011; Aizeman & Noy, 2005; Beugeldijk, Smeets & Zwinkels, 2008; Bevan & Estrin, 2000; Brainard, 1997; Dauti, 2016; Fugazza, 2004; Golberg & Klein, 1999; Gu, Awokuse & Yuan, 2008; Kuban & Vuksic, 2007; Markusen, 1996, 1998; Markusen et al., 2002; Popovici, 2018; Zhang & Song, 2000; Yin, Ye & Xu, 2014). In addition, FDI inflow-promoting policies have often been justified, since they have in turn led to a considerable increase in export growth. If empirical evidence shows that FDI raises export growth only by raising export supply, then it is not important for governments or policymakers to increase export growth by promoting domestic investment, instead they would be better served by promoting FDI inflows. On the other hand, if export growth is increased by direct FDI inflows through foreign capital inflows, then policymakers would be committed to attract further FDI inflows.

Surprisingly, only a few studies have investigated the relationship between FDI inflows and export performance in transition countries, particularly in the Western Balkans. Because many countries in transition have been plagued by several problems including war, political instability and hyperinflation, their financial sector has collapsed. In transition, these countries now provide interesting cases for study, particularly with regard to whether FDI inflows have improved export performance in Central, Eastern and South-eastern European countries in transition. The research question we establish in this paper is whether FDI inflows have been significant determinants of export performance in 23 transition countries in Europe between 2000 and 2015. Hence, the primary objective of the study is to determine whether FDI inflows have positive effects on export performance in European countries in transition. The study includes 23 transition economies from Central, Eastern and South-eastern Europe for the period 2000 to 2015 (inclusive). For this purpose, we employ different techniques, including the model of fixed effects, the model of random effect, Hausman-Taylor Instrumental IV, and the generalized method of moment (GMM).

The contribution of this study is twofold: first, only a few studies have analysed the effect of FDI inflows on export performance in transition countries and whether these inflows have a positive influence on the development of export performance. Second, it attempts to fill a gap in the literature concerning the impact of FDI inflows on export performance in countries in transition, including the Western Balkan countries. Furthermore, the study includes control variables such as the real exchange rate, real GDP, domestic investment and the trade liberalization index. Most of the previous studies have examined only the relationship between FDI inflows and exports of these countries without taking domestic investment into consideration.

To summarize, the empirical results show that FDI inflows have a significant effect on export growth in European countries in transition. Domestic investment and the trade liberalization index (TLI) also have a positive effect on export growth. The real exchange rate (RER) and real GDP have a negative effect on export growth.

The paper is organized in four sections. The first section presents a literature review, the second section presents the econometric methodology and data, and the third section discusses the empirical models and findings of the study.

2. Literature Review

The relevant theories can be classified into two important streams; standard international trade theory or international factor movements, and multinational enterprise theory (MNE). Based on the literature on international trade and multinational theory, trade could be a complement and a substitute simultaneously. Hence, the impact of FDI inflows on export growth is complex as we will attempt to explain through the motivation behind FDI inflows in the host country. In this context, FDI inflows could affect the volume of trade in both countries; that is, in the host country and the home country. Consequently, the impact of FDI inflows on export growth depends on the motivation behind FDI inflows. In general, the literature shows four types of FDI inflow motivation – resource seeking, market seeking, efficiency seeking and strategic asset seeking.

The impact of FDI inflows in terms of resource seeking is the investment of a multinational enterprise in order to use the cheap cost of resources or labour to produce products for export to the home countries. As a result, exports increase for the host country. In a market-seeking economy, the multinational enterprise will produce for the host countries and have little or no effect on export growth. However, this depends on whether the country is a transition or developed country, where the most widespread FDI inflows are resource seeking. Consequently, this will increase export growth if the country is in transition. In developed countries, FDI inflows will seek more efficiency and strategic assets for producing output which will be exported to the same developed countries or other similar countries. In addition, the theory also distinguishes between vertical and horizontal FDI inflows for a better understanding of the effect of FDI inflows on export growth. Vertical FDI inflow provides international markets with a lower cost of goods in a variety of host countries and exports these goods (Damijan, Rojec & Ferjančič, 2008; Gu et al., 2008; Kutan & Vuksic, 2007). Horizontal FDI inflows seek to obtain market shares by replicating activities in the home country, which are considered substitutes for trade (Gu et al., 2008).

In addition, most empirical results show that there is no single theory that can explain FDI, and thus far, no unique theory has emerged. Since there is no single theory to explain the effects of FDI inflows on trade, we attempt to analyse the most important empirical evidence relating to the relationships between FDI inflows and trade. Concerning the relationships between FDI and trade, the empirical evidence does not provide a conclusive and unique answer; however, in recent years the relationship between FDI inflows and exports has received wide attention in empirical studies. The lack of consensus can be due to the different periods that have been covered by previous studies, and the different countries and econometric methods applied. Brainard (1997) investigates industry level data for 27 countries, applying a 2SLS and finds a strong confirmation of the “proxy-concentration trade off”. He suggests that when income per capita in the partner country catches up to the US level, FDI tends to substitute exports. Goldberg and Klein (1999) analyse the link between FDI and trade in the US and Latin America. In their study, they find that FDI from the US may lead to significant and varied shifts in the composition of activities in many Latin American countries and across many manufacturing industries. Fontage and Pajot (1997) analyse country level data for 21 countries by applying panel data fixed effects and find that FDI inflows have a positive effect on exports of different magnitude for the various countries. The study by Aizeman and Noy (2005) also indicates that there is a positive relationship between FDI inflows and freight trade. However, according to the authors, it is difficult to

identify whether FDI inflows and outflows refer to different types of goods. In a different study, Kutun and Vuksic (2007) analyse the effects of FDI inflows on exports in 12 Central and Eastern European economies, using regression analysis in the period from 1996 to 2004. They find that FDI has increased domestic supply capacity and export growth. The supply capacity effects take place when FDI inflows increase the host country's production capacity, which in turn leads to an increase in export growth. Nath (2009) applied a panel data approach to investigate the effects of FDI and trade in 13 transition economies of Central and Eastern Europe and the Baltic region from 1991 to 2005. He shows that there is a significant positive effect of trade on growth, but FDI has had no significant impact on growth and on export growth in these transition economies.

A study by Choong and Lam (2010), on the other hand, applied a panel data method for 70 developed and developing countries and find that the FDI inflow has a strong negative effect on economic growth in developing countries due to weak legal regulations and shallow financial intermediaries, which in turn led to the misallocation of private capital, thereby decreasing economic performance and exports. Kersan-Skabic and Zubin (2009) find that FDI inflow has a negative effect on employment. However, FDI inflow does not have any effect on GDP growth and exports in the Croatian economy. Consequently, the positive effect has failed because of the low share of greenfield investments. Bevan and Estrin (2000) show that FDI inflow has a positive impact on export growth in countries in transition. Hence, FDI inflow also has an impact on the process of these countries integrating into the EU. The result showed a positive correlation between FDI and the process of integration in countries in transition. Damijan et al. (2008) analyse the relationship between FDI and export performance in CEE countries in transition. In their study, they were interested in identifying the motives behind the export performance in these countries. Therefore, the authors divided the CEE countries into two groups; first the group that joined the EU in 2004 and, second the group that become members several years after 2004. They find that supply capacity improvements were the main factors of export growth in the first part of the analysed period in both groups of countries, followed by easier access after becoming EU members. Furthermore, they show that FDI has a positive influence on export growth in those countries due to their involvement in restructuring and manufacturing sectors. Gu et al. (2008) investigate manufacturing sectors in China from the period 1995 to 2005. They conclude that FDI inflow is a significant factor and important tool for fuelling export growth in thirteen out of fourteen manufacturing sectors examined. The study by Popovici (2018) examine export capacity in EU countries based on FDI and domestic investment, using a dynamic panel data GMM approach for the period 1999 to 2012 in EU member states. The author finds that the FDI inflows have a significant effect on export performance in the new EU members due to the fact these countries benefited from FDI-specific effects such as the transfer of technology and know-how. Alternatively, domestic investment in the old EU member states is the main instrument for increasing export performance. Dauti (2016) finds evidence that the mixed nature of FDI inflows into the host SEE-5 and EU-NMS-10 countries support both the complementary and substituting relationship between trade and FDI in the host countries. Vural and Zortuk (2011) investigate the relationship between FDI and exports over the period 1982 to 2009 in Turkey. Applying a three-stage least squares (3OLS) method, they find that FDI has a significant impact on export volume, and the exchange rate or appreciation of the Turkish lira has a negative effect.

To summarize, a number of studies have examined the various factors that affect exports in developed and developing countries. However, only a few studies have developed an

empirical model in countries in transition, particularly the Western Balkans. To better understand the FDI inflow process and its impact on export growth and thus economic growth, this study sets up an empirical model in order to investigate the effect of FDI inflows on export performance in countries in transition including the Western Balkans, and how policies can manage FDI inflows.

3. Econometrics Methodology and Data

3.1. Econometric methodology

The empirical analysis contains panel data for the period from 2000 to 2015 for 23 countries in transition in Central and Eastern Europe. These countries are Albania, Armenia, Azerbaijan, Belarus, Bosnia & Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kosovo, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, and Ukraine. The sources of datasets are from the World Bank's Development Indicators, International Financial Statistics, UNCTAD and the Heritage Foundation.

The dynamic panel model (GMM system) is employed to test the relationships between FDI inflows and export and other independent variables in Central and Eastern Europe. We apply the Arellano and Bond (1991), Blundell and Bond (1998b), Blundell, Bond and Windmeijer (2000) GMM estimator as it is a proper estimator. The GMM procedure also allows us to control for the problem of endogeneity bias caused by reverse causality running from exports to FDI inflows and other explanatory variables. For comparison purposes, we apply a fixed effects model, random effects model and Hausman-Taylor IV.

The reliability of the GMM estimator depends on the validity of its instrument sets. To address this issue, we consider two specification tests suggested by Arellano and Bond (1991), Arellano and Bover (1995), and Blundell and Bond (1998a). The first test is the Sargan test that tests whether the null hypothesis of over-identification restrictions apply or the instruments as a group are exogenous. This test proves or rejects the overall validity of instruments by analysing the sample analogue of moment conditions used in the estimation process.

The second test examines the null hypothesis that autocorrelation does not exist, which means that the error terms are not serially correlated. In the difference regression, we test whether the differenced error term is first-order or second-order serially uncorrelated.

The specification of the dynamic panel model (GMM) for testing the impact of FDI inflows and exports in countries in transition is as follows:

$$EXPORT_{it} = \mu + B_1 EXPORT_{i(t-1)} + B_2 FDI_{it} + B_3 RER^{it} + B_4 INV_{it} + B_5 TLI_{it} + \delta_i + \gamma_i + \varepsilon_{it} \quad (1)$$

The dependant variable $EXPORT_{it}$ stands for exports from each country i , t represents years, μ is the constant term (as in Sun, 2001 and Zhang and Song, 2000); explanatory variables include $EXPORT_{i(t-1)}$ first lag of the dependant variable, and FDI_{it} inflows is the accumulated stock. This variable is chosen based on FDI inflows and the relative importance of foreign investors. The accumulated stock is a good predictor of overall effects on exports, which is a source of indirect effects on the economy. The third independent variable in this study is real

exchange rates (RER). The RER reflects the internal and external pricing conditions, with an increase in its value indicating real appreciation. In his study, Sun (2001) uses the nominal ER, but this does not fully identify differences in price levels. There are many factors influencing price changes, so the real effective exchange rate is the best option. Authors Goldberg and Klein (1999) use real exchange rates. The other independent variable is real GDP. The growth rate of GDP for the economies that cooperate in the field of trade are to be found in the Goldberg and Klein (1999) model, but not in the models by Sun (2001) and Zhang and Song (2000).

Based on macroeconomic theory, to analyse the impact of FDI on the exports of transition countries, another factor to be considered is the change in capital formation in order to contribute to the effects of domestic investment (INV). In this econometric model one should be careful because there can be a causal link between FDI and gross fixed capital formation, particularly in the case of greenfield investments. Krksoka (2002) finds that many of the transition countries have more FDI inflows caused due to the fusion of local firms in the privatization process. Therefore, these flows are considered an important source of funding for capital formation. An index has been added as a proxy for trade liberalization (TLI).¹ This can take values between 1 and 4.3, where the lower value stands for a less liberalized regime. The term δ_i is the country fixed effect that enables us to control for time-invariant unobservable factors that may affect economic growth, which otherwise may lead to bias coefficients. The term γ_i is the common time effect that covers the business cycle effect, which otherwise may lead to spurious regression between the dependent variable and the explanatory variables. The term ε_{it} is the usual standard error. For the empirical model, we apply the natural logarithm form of EX, FDI inflows, RER, INV and real GDP due to stationary requirements.

3.2 Data description

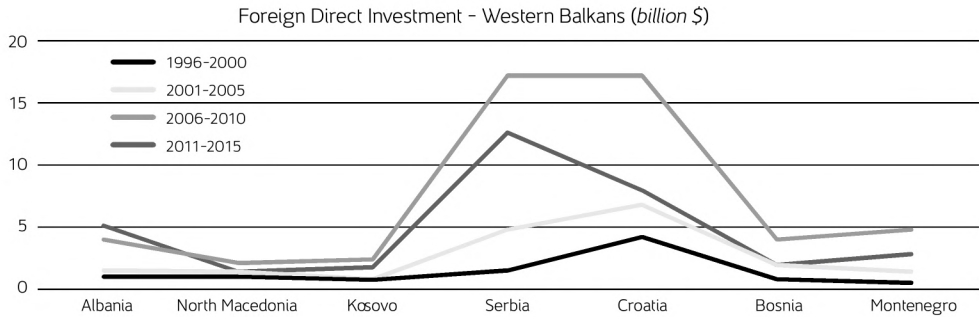
The export data on the 23 countries in transition for the period 2007 to 2015 are presented in Appendix 1. The United States of America is ranked as the leading market for attracting FDI, with 22 percent of the world stock of FDI in 2014. Meanwhile, if regional markets are taken into account, the EU is the region that has absorbed the highest level of global FDI, with 32 percent of the world stock by 2014. Within the EU, almost half of these investments are attracted by Great Britain, Germany, Spain, and the Netherlands. On the other hand, EU countries are also the main investors in the global economy, with 37 percent of the global stock of global investment.

The region of southeast Europe (*Albania, Bosnia and Herzegovina, Montenegro, Macedonia, Serbia, Bulgaria and Romania*) absorbed less than 1 percent (exactly 0.9 percent) of the global FDI stock by 2014, according to UNCTAD data. Even worse, if Bulgaria and Romania are excluded, which have attracted higher amounts of foreign investment since accession to the EU, the figure reaches the very low level of only 0.4 percent of global FDI stock. According to the Central Bank of Kosovo, FDI received in Kosovo by September 2015 marked the value of 270.4 million euros, or 148.6 million euros more than in the same period in 2014. The FDI growth is the result of higher FDI inflows, while the year-on-year difference is due to the fact that 2014 was characterized by super-dividend distribution. FDI in Kosovo

¹ The index was constructed by EBRD and it is called: "Index of forex and trade liberalization" (see EBRD 2003).

is mainly concentrated in sectors of the economy such as real estate with 54.2 percent of total FDI realized by September 2015, construction with 18.7 percent, financial services with 15.7 percent, transport and communication with 7.7 percent, energy with 4.2 percent, etc. (Central Bank of Kosovo, 2016). Figure 1 presents some data for FDI inflows in southeast Europe between 1990 and 2015.

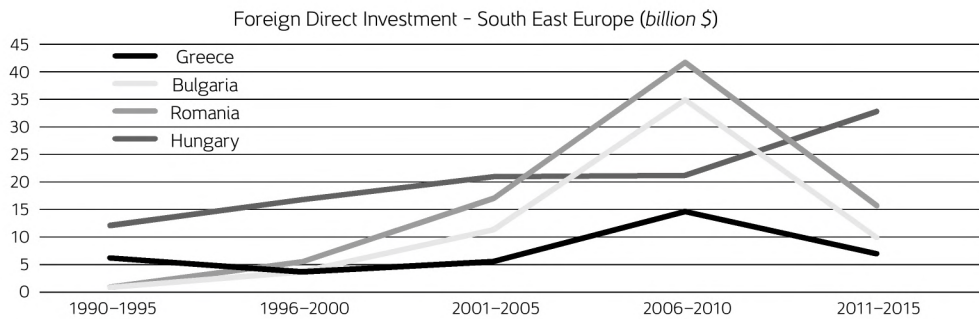
Figure 1. FDI inflows, by region and economy in southeast Europe between 1990 and 2015



Source: Author's calculation

The FDI inflow in Albania has maintained a positive growth trend over the years. For 2016, referring to data from the Bank of Albania, it has attracted more FDI than previous years, maintaining this trend. Specifically, from EUR 890 million in 2015, the FDI inflow in 2016 amounted to EUR 983 million (Bank of Albania, 2016). Foreign companies invested in the Albanian economy 10.5 percent more than a year earlier. According to recent data from the National Bank of Macedonia, FDI has fallen by 12.4 million euros. In February 2017 alone, foreign investments decreased to 19.1 million euros, compared to January, when it was 31.9 million euros – a loss of 12.8 million. The same can be said of March 2017, when compared to March 2016, there was a reduction in FDI of nearly 17 million euros.

Figure 2. FDI inflows by region and economy in southeast Europe, 1990 to 2015



Source: Author's calculation

4. Empirical Result

Table 1 shows the estimation results from equation (1). The results show that all calculated dynamic panel models are well modelled, as the coefficient for lagged EXPORT is statistically significant. Furthermore, the Sargan test for identifying restrictions in the presence of heteroscedasticity with the associated p-value, which examines the validity of the instrumental variables, is accepted (obtained in the second step result) as a healthy instrument for all estimated equations. Therefore, the results from the GMM estimator proves the hypothesis that instrumental variables are not correlated with the set of residuals. As a result, the Arellano – Bond tests AR(1) and AR(2) with associated p-values are rejected in the first order, while being accepted in the second order, which confirms that there is no autocorrelation in the second order between the errors term (by construction, the differenced error term is first-order serially correlated even if the original error term is not).

Table 1. Regression result

	Fixed-Effect Model (1)	Random-Effect Model (2)	Hausman-Taylor Model (3)	GMM Model (4)
Ln(Export_first_lag)	-	-	-	0.0791** (0.007)
Ln(FDI inflow)	0.115*** (0.001)	0.1180*** (0.000)	0.1155*** (0.001)	0.0574*** (0.078)
Ln(RER)	0.0133** (0.034)	0.0110** (0.067)	0.0117** (0.017)	-0.0813** (-0.0078)
Ln(Real_GDP)	-0.1025** (0.011)	-0.1020** (0.010)	-0.1029** (0.010)	-0.1681** (0.000)
TLI index	0.4531** (0.000)	0.4541** (0.000)	0.4546** (0.000)	0.4923** (0.000)
Ln(INV)	0.3687** (0.000)	0.3622** (0.000)	0.3657** (0.000)	0.4444** (0.000)
Arellano – Bond test for AR (1)	-	-	-	(0.000)
Arellano – Bond test for AR (2)	-	-	-	(0.363)
Sargan Test	-	-	-	(13.851)

Note: Exports is a dependant variable. The results are from the first step of the GMM estimator. Two lags of all variables are utilized as instruments for the GMM method. All the GMM coefficients are estimated applying a robust standard error. The robust standard error is in parentheses, *, **, ***, denote significance at 10%, 5% and 1% respectively. The Sargan test shows the p-value for the null hypothesis of the validity of instruments. The AR (1) and AR (2) tests are p-values for the first and second order of the auto correlated error term. That is, no autocorrelation exists between the residuals. Author's calculation.

As seen from the Table 2 all econometric results show almost the same results, which confirm the robustness of the results. We interpret only the results obtained by the GMM estimator as to whether it is an appropriate estimator and allows us to control for the problem

of the endogeneity bias caused by reverse causality running from exports to FDI inflows and other explanatory variables. The results of the fourth column (GMM system) indicate that FDI inflows have a positive impact on export growth in countries in transition. The coefficient is statistically significant at the 10% level of significance. The result is consistent with most of the previous studies mentioned above. An increase of FDI inflows of 1% will generate 0.057% of export growth. As seen from Table 2, the real exchange rate negatively affects the export of countries in transition. The coefficient is statistically significant at the 5% level. This result is in line to most of the previous studies mentioned above.

Based on this analysis, we can see that real GDP has a negative impact on the export in these 23 transition countries. If real GDP rises to 1%, this would result in a 0.16% reduction in export growth. These two variables are significant at the 5% significance level (0.000). The TLI index positively affects export growth in countries in transition. Based on the GMM results, we can see that there is a significant relationship between domestic investment and exports in the countries in transition examined in this study. If domestic investment increases by 1%, it would increase the export growth of these countries by 0.44%.

Based on the empirical results, there is a positive impact from FDI inflows on the exports of transition countries. The development of exports as part of international trade exhibits consistency regarding FDI inflows. The results of the paper show that FDI inflows have a very important effect on export promotion. FDI inflows in countries in transition are the main indicator of export growth because the choice of other export promotion instruments is being reduced as a consequence of international trade agreements or because of direct export subsidies in specific industries, which were ineffective in many cases. FDI inflows and their positive impact on exports are particularly important for those countries in Central and Eastern Europe whose aim is to integrate into the European Union. Since the governments of transition countries are aware of the potential benefits of FDI inflows in the economy of the host countries, there is strong international competition for FDI inflows. The results presented in the empirical analyses proved the hypothesis that FDI inflows have an important effect on the export growth of the 23 countries in transition examined in this study.

4. Conclusion

The study examined whether internal FDI inflows have a positive effect on export growth in countries in transition over the period 2000 to 2015. Consequently, the aim of this paper is to investigate whether foreign direct investment inflows in Central and Eastern European countries have affected the export performance of the host economies. Attracting foreign direct investment inflows in countries in transition can contribute not only to the export growth of these countries by increasing supply capacity, but also through the specific effects of FDI inflow, since multinational companies have a better knowledge of international foreign markets, advanced technology, lower production costs and better connectivity with the supply chain. Based on the literature review and the empirical results of our study, we can conclude that FDI inflows have a significant positive impact on the export growth of these countries as well as the countries that are new EU members. This positive impact is the result of the fact that all the countries involved in this research through 2000–2015 attracted more foreign direct investment inflows oriented toward exports as an important indicator of the economic development of these countries.

The empirical results of this study may have important implications for the government policies in these countries, which should develop policies that encourage FDI inflow by providing more incentives for foreign companies and implementing new appropriate reforms to attract foreign investors. It is recommended that the countries involved in this study should develop strategies that will improve the level of infrastructure, human resources, governance, business environment etc. These strategies will have a positive impact on business transactions, production costs, and overall economic competition. Policymakers should value export promotion more, regardless of the various facts presented by the empirical evidence. Therefore, FDI inflows could potentially have boosted the economic growth of countries in transition, through export growth.

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Appendix 1. Exports in millions of dollars in transitions countries (2007 – 2015)

No.	States	2007	2008	2009	2010	2011	2012	2013	2014	2015
1	Albania	28.1	29.6	29.6	32.4	34.0	33.4	35.4	28.1	27.1
2	Armenia	19.2	15.0	15.5	20.8	23.8	27.6	28.4	28.5	29.7
3	Azerbaijan	68.1	65.8	51.6	54.3	56.4	53.7	48.7	43.3	37.8
4	Belarus	60.9	60.9	50.5	53.2	81.1	81.3	60.3	56.9	60.1
5	Bosnia & Herzegovina	27.1	26.9	25.0	29.7	32.1	32.2	33.6	33.9	..
6	Bulgaria	52.0	52.3	42.4	53.7	62.3	63.4	67.0	65.1	66.5
7	Croatia	39.0	38.5	34.5	37.7	40.4	41.6	43.0	46.3	49.4
8	Czech Rep.	66.6	63.4	58.8	66.2	71.6	76.6	77.3	83.8	84.5
9	Estonia	63.2	66.8	60.8	75.1	86.5	86.6	86.8	83.9	79.8
10	Georgia	31.2	28.6	29.7	35.0	36.2	38.2	44.7	42.9	45.0
11	Hungary	78.3	79.7	74.8	82.3	87.2	86.8	88.0	89.3	..
12	Kosovo	15.5	15.7	17.1	19.8	19.6	18.3	17.3	19.6	19.1
13	Latvia	38.5	39.6	42.6	53.7	58.0	61.5	60.4	59.5	58.8
14	Lithuania	50.4	57.1	51.9	65.3	75.0	81.7	84.1	81.2	77.3
15	Macedonia	44.1	43.2	32.8	39.8	47.1	45.4	43.4	47.8	48.5
16	Moldova	47.5	40.8	36.9	39.2	45.0	43.5	43.3	41.5	43.4
17	Montenegro	44.4	39.5	32.1	37.0	42.3	43.7	41.3	40.1	43.3
18	Poland	38.8	38.3	37.6	40.0	42.5	44.4	46.3	47.5	49.4
19	Romania	29.1	26.9	27.4	32.3	36.8	37.5	39.7	41.2	41.1
20	Russia	30.2	31.3	27.9	29.2	28.3	27.4	26.6	27.5	29.5
21	Serbia	28.4	29.1	26.8	32.9	34.0	36.9	41.2	43.4	47.7
22	Slovakia	83.5	80.2	67.8	76.6	85.3	91.8	93.8	91.9	93.8
23	Ukraine	44.8	46.9	46.4	50.7	49.8	47.7	43.4	49.2	52.8

Source: World Bank and UNCTAD

Assessment of Psychosocial Risk Factors and their Impact on Health-Care Workers' Mental Health: An Empirical Study in Estonian Nursing Homes

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Abstract

According to the World Health Organization, the psychosocial work environment is one of the most important factors in preserving the wellbeing of healthcare workers and ensuring the quality of healthcare services. The psychosocial environment in healthcare is complicated and related to stressful work, high demands and working in shifts. The purpose of the study is to explore the relationships between work-related psychosocial risk factors and the mental health of care workers. The study used the Copenhagen Psychosocial Questionnaire, version II and the statistical analysis was performed using the SPSS 24.

Our results show that the work environment influences the mental health of care workers. Psychosocial hazards, such as low quality of management, lack of staff, role conflicts, low dedication among workers, physically and mentally challenging work and stress at work, are prevalent in the healthcare sector. The management of the organization including the management of safety issues should be proactive and oriented towards preserving the health of the employees and offering patient-centred services.

Jel classification: 123

Keywords: psychosocial risk factors, mental health problems, stress, burnout, healthcare, nursing home

1. Introduction

The field of healthcare has changed as a result of rapid technology developments during the last three decades. At present, a lack of the necessary staff is critical in the field of healthcare, and existing positions are being fulfilled by care workers with lower levels of vocational education, which in turn has a significant influence on the quality of the services offered and the sustainability of the institution due to unreasonable additional organizational costs (Titlestad et al., 2018).

It has been confirmed by the study by Rahman, Naing and Abdul-Mumin (2017) that problems concerning lack of staff may be related to the management of the organization and its prevailing work environment. A difficult psychosocial environment from the stressful work, high demands and working in shifts is most commonly highlighted in the field of healthcare (Toode, et al., 2015). The World Health Organization has named the psychosocial work environment (PWE) as one of the most important factors in preserving the wellbeing of healthcare workers and ensuring the quality of healthcare services (Rahman et al., 2017).

In the field of healthcare, the problematic psychosocial work environment is associated with the following factors: lack of staff, role conflict, low management quality, problems related to dedication, and the physical and psychological stress of the staff. The influence of the psychosocial work environment is measured in both employee and organizational terms. From another perspective, the psychosocial work environment due to high standards, efforts and unbalanced payment, and the inability to influence one's work has an effect on employees quitting their jobs (Li et al., 2010) and their incapacity to work, which results in increasing costs for the healthcare system and organizations and society (Rahman et al., 2017).

Based on the statements above, the objective of the current study is to explore the relationships between work-related psychosocial risk factors and four specific mental health problems in care workers (stress, somatic symptoms, symptoms of depression and burnout) in Estonian nursing homes. This study sets three research questions:

- a) Which psychosocial hazards have a negative influence on the mental health of healthcare workers?
- b) What is the impact of the mental health of healthcare workers on patient safety and the quality of the services offered?
- c) How can psychosocial hazards be mitigated through social support and quality leadership?

The study used a cross-sectional survey conducted among the care workers in nine Estonian nursing homes in November 2017. The Copenhagen Psychosocial Questionnaire (COPSOQ II) was used. The study explored psychosocial risk factors and mental health problems (stress, somatic symptoms, symptoms of depression and burnout) among care workers in Estonian nursing homes.

This article is organised as follows: Section 2 provides a literature review addressing the management of occupational safety in the healthcare sector, the safety culture and safety management systems in nursing homes, and safety climate assessment as a safety performance antecedent. Section 3 describes the methodology of the study. In addition, the instrument and test sample used and methods of data analysis are described. Section 4 presents the results of our research. In the last section, the results are discussed and conclusions presented in response to the research questions, and limitations and suggestions for future research are given.

2. Literature overview

2.1. Psychosocial Risk Factors in Healthcare

Studies in the field of healthcare have found that one of the reasons why employees quit their jobs is the psychosocial work environment, leading to identity crisis and difficulties in pursuing a career; role conflicts have also been found to occur. In addition, employees are exposed to such psychosocial risk factors as bad work organization, lack of support at work, conflicts between colleagues, and violence and bullying at work (Lachman, 2015; Longo & Hain, 2014). Therefore, the quality of the provided services may be affected because the employees are not committed and dedicated. In addition, as a result of psychosocial risks, several physical and psychological health problems may occur. Both employees and organizations suffer from the negative influences of the psychosocial work environment (Li et al., 2010; Rahman et al., 2017).

The organization of work and creating the psychosocial work environment are important in nursing. When establishing the psychosocial work environment, it is necessary to consider the needs of the employees and the competence of the managers, which is expressed in management awareness and management quality (Mints-Binder, 2014). The psychosocial work environment consists of job demands, employee autonomy to make decisions, the working environment, social support and the effort-reward balance. An imbalance between these factors has a negative influence on the employees and the organization and increases the risk of health problems among the employees (Rahman et al., 2017), including mental health problems (Freimann & Merisalu, 2015) and skeletomuscular diseases (Freimann, Pääsuke & Merisalu, 2016).

A negative work environment causes burnout in the employees, which is in correlation with the quality of patient safety and healthcare services (Ulrich & Kean, 2018). It is essential to note here that the likelihood of errors, such as when administering drugs, increases when the employee is emotionally and physically exhausted. Previous studies have also shown that burnout may cause exhaustion and a lack of commitment to the job (Maslach, Schaufeli & Leiter, 2001; Vifladt et al., 2016). In addition, problems with employee dedication and satisfaction with work have been highlighted in several studies (Freiman & Merisalu, 2015; Ulrich & Kean, 2018). Low perceptions of patient safety caused by worker burnout were also identified in the study by Halbesleben et al. (2008).

Organizational support is an important component of the psychosocial work environment, which is horizontal across relationships with colleagues as well as vertical across relationships with management. Social support in the work environment is expressed in relations with colleagues and the management, in clearly described work roles, work pressure and innovativeness. A lack of social support influences the work satisfaction of the employees and may cause stress at work and burnout (Dehring, Treuer & Redley, 2018).

Social support from the management is mostly perceived in terms of recognition, which according to earlier studies has a positive influence on employee work satisfaction and dedication and is inversely related to quitting one's job (Mints-Binder, 2014; Ulrich & Kean, 2018). Whereas lacking social support from the management may cause employee burnout, depression, stress at work, and a decrease in cognitive abilities may cause somatic problems, which correlates with patient safety and the quality of healthcare services (Dehring et al., 2018; Ulrich & Kean, 2018).

Collaboration, open communication and respect are indicators of the work environment that reflect organizational culture, and which have been referred to by the World Health Organization in recent decades as important indicators for ensuring patient safety (Westerberg & Tufvelin, 2014). Open communication is a component of supporting the work environment, which has a positive influence on employee dedication and behaviour and promotes collaboration between employees (Sepp & Tint, 2017). In addition, collaboration between workers depends on the work environment and its characteristics, which can be learning or punishing. Healthcare organizations by nature should prevent mistakes or be proactive; admitting errors through open communication should enable all employees to avoid repeating mistakes in the future and facilitate learning from mistakes. The abovementioned phenomena are widespread in healthcare organizations in many countries (Goh, Chanand & Kuziemy, 2013; Ratnapalan & Ulerik, 2014; Sepp & Tint, 2017), where they have created a blame-free culture and non-punitive environment, and where every mistake is identified, registered (Alameddine, Saleh & Natafqi, 2015) and open communication promotes trust, respect and barrier-free collaboration between employees and the management (Harrington & Smith, 2015). Collaboration excludes violence and bullying at work, which is common in the field of healthcare, and also adds psychosocial risk in the work environment, which is related to the mental health of the employees (Granstra, 2015; Lachman, 2015; Longo & Hain, 2014).

Horizontal violence is an increasing issue in the field of healthcare. Several studies show that more than 50% of healthcare workers suffer from the destructive behaviour of their co-workers (Alspach, 2008; Cleary, Hunt & Horsfall, 2010). Violence is also expressed by leaders (vertical violence); Ulrich and Kean (2018) point out that 57% of the participants in their study reported violence-related incidents by their leaders. Violence and/or bullying is caused by the organisation of the work of the institution and its hierarchical culture, where no anti-violence policy exists or practices developed to reduce the incidence of violence (Alspach, 2008; Cleary et al., 2010; Granstra, 2015). It is very difficult for the victim to admit that she/he is a victim and it is easier to keep incidents secret. In order to find out about such incidents, it is necessary to create a safe environment to ensure justice and the protection of the victim (Cleary et al., 2010; Granstra, 2015).

The consequences of bullying are both physical and psychological, and most commonly include: somatic problems, headaches, stress, irritation, anxiety, sleeping problems, worrying, worsening of social skills, depression, fatigue, difficulties in concentrating, hopelessness, psychosocial complaints, and post-traumatic stress (Cleary et al., 2010). All of the previously mentioned phenomena are important regarding patient safety; ignoring them is irresponsible and the consequences can be dangerous. The aim of a healthcare organization is to provide a patient with a quality service, and therefore to minimize the risks. One solution to bullying problems is seen in a strong work environment and supportive organizational culture, where there is open communication and supportive relationships with colleagues and leaders, where employees can talk freely about every possible topic and with everyone, where there are no structural, ethnic or cultural barriers, and where equal treatment of people is ensured (Alspach, 2008; Cleary et al., 2010; Granstra, 2015; Read & Laschinger, 2013; Tuckey et al., 2009; Ulrich & Kean, 2018).

2.2. Patient Safety and the Safety Climate

In healthcare, psychosocial risk factors are related to the quality of the services provided. Studies show that a heavy workload, bad and insecure working conditions, poor work organisation, lack of employee involvement and low safety culture are associated with stress at work and burnout (Garret, 2008; Li et al., 2010; Toode et al., 2015; Vifladt et al., 2016). In a working environment with prevailing psychosocial risk factors, healthcare workers are more commonly diagnosed with anxiety, burnout, depression and the employees have sleeping problems. In the long term, these problems can irreversibly affect the mental health of the nurses, their quality of life and family relations worsen their perception of risk increases and creates stress (Javaid, 2018). The employees suffering from mental health problems are more vulnerable, services provided by them are not safe from both the point of view of the employee and of the patient (Flin, 2007; Garret, 2008). For example, the main sources of hazards for nurses include the risk of injuring themselves with an injection needle (Jahangiri et al., 2016) and burnout (Ogresta, Rusac & Zorec, 2008; Xie, Wang & Chen, 2011).

Burnout syndrome is related to depersonalization, which by nature reflects high emotional fatigue and somatic symptoms and is revealed in the form of cynicism and low dedication (Garret, 2008). According to Garret (2008), stress at work and burnout have a direct relationship to patient safety, and therefore the quality of healthcare services, since according to Wolfe (2001), patient safety is one of the quality indicators of healthcare services. Studies show that stress management at the organisational level can also be the most important aspect in patient safety (Vifladt et al., 2016).

The likelihood of avoiding errors in the work environment is ensured by different strategies, including assessments (Flin, 2007). One method involves assessing the safety climate, which refers to the climate for psychosocial health and worker safety, and can predict worker safety behaviour, accidents and injuries. The safety climate is made up of employee perceptions of the commitment of the management to safety and performance correlated to safety policies, procedures and practices (Dollard & Bakker, 2010). It is important to understand that the organization of work is an integral part of the work environment; bad planning, which is expressed through work pressure and high emotional demands has an influence on the mental health of employees and causes psychological stress at work (Dollard et al., 2007). According to Vifladt et al. (2016), a positive safety culture is associated with a high level of coherence, where workers perceive that they manage stress positively, their work is challenging and meaningful and they have a sense of purpose.

In healthcare, it is important to understand that the organizational climate influences different outcomes, including occupational safety and patient safety, the influence of which is perceivable organizationally and economically. Studies show that in healthcare, occupational safety is related to patient safety (WHO, 2014) and to the safety climate (Flin, 2007; Pousette et al., 2017). It is common for economic pressure to influence the healthcare sector. Rationalizations are expected to be conducted at the same time because, due to the changing demographics, the demands for care are increasing. Since medicine and technology are developing, it is possible to continuously offer high quality care, but the costs are also constantly increasing. A decrease in occupational and patient injuries would reduce unwarranted costs and make resources available for preserving sufficient and satisfactory high-quality care (Pousette et al., 2017).

The main solutions involve senior management dedication and their inclusion in the development of a work environment that includes policies, strategies, practices and procedures for guaranteeing a strong safety culture (Sfantou et al., 2017). We may argue that a positive safety climate may help resolve physical as well as psychological health problems and injuries if it has gained enough attention in the institution. Yet, the money being spent on psychological health problems is substantial (Dollard & Bakker, 2010).

3. Methodology

3.1. Study Design and Sample

The study was designed as a cross-sectional survey to investigate the relationships between work-related psychosocial risk factors and four mental health problems experienced by care workers and nurses in Estonian nursing homes. Cross-sectional studies allow the inclusion of a large number of variables (Thelle & Laake, 2015). This method gives an opportunity to identify different occupational hazards at a specific point in time in the studied sample population and helps to describe the association between the exposure and the outcome. In addition, the method shows the incidence and prevalence of the aspects being assessed (Nour & Plourde, 2019). The survey was conducted in November 2017 in nine nursing homes in four areas of Estonia. The institutions were chosen on a random basis. The sample consisted of nursing homes, aftercare hospitals, private and public (under a local authority) organisations and nursing homes with a special facility for clients suffering from dementia. Previous studies show that work in nursing homes and the healthcare sector is generally emotionally difficult and stressful (Pousette et al., 2017). The main mental health issues emerging from psychosocial hazards include burnout, workplace stress, and depression and somatic symptoms, which may affect the mental health of employees as well as the quality of their work. Due to emotional exhaustion and depersonalization, the employee may experience the need to compromise on patient safety and the quality of their work (McNamara, 2012). Previous studies report that through effective safety management, particularly through establishing a safety culture, the psychosocial climate can be influenced and consequently, mental health problems can be prevented (Pousette et al., 2017). According to a study conducted in Estonia (Freiman & Merisalu, 2015), the prevalent psychosocial hazards among Estonian nurses are quantitative demands (workload), emotional demands, work pace and role conflicts. Based on these results, our study focuses on critical mental health problems such as occupational stress, burnout, depression and somatic symptoms.

Our purpose is to explore the relationships between work-related psychosocial risk factors and the four main mental health problems (i.e. stress, burnout, somatic symptoms and depression) in care workers in Estonian nursing homes.

3.2. Data and Method

In our survey, a paper-based questionnaire was used with a total of 509 participants. The participation was voluntary, in which each questionnaire included a cover letter about the study and definitions of terms. Information about the voluntary nature of the participation was also explained in the letter. A total of 340 completed questionnaires were returned

(66.79% of the sample), the majority of the respondents were female (332 or 97.6%). Approval for the research was obtained from the management of the institutions and The Research Committee of Tallinn Health Care College.

The Copenhagen Psychosocial Questionnaire version II (COPSOQ- II) was used to assess work-related psychosocial factors and mental health problems (MHPs) (Kristensen et al., 2005). A licensed translator performed the translation and returned the translation of the questionnaire. Cronbach's alphas were calculated to assess the internal consistency of the scales for psychosocial factors and MHPs. In our study, psychosocial factors were assessed using 115 items that covered the following four psychosocial domains: a) demands at work; b) work organisation and job content; c) interpersonal relationships and leadership; d) values at the workplace. To assess the MHPs, we used 16 items grouped into the following four scales: stress, somatic stress symptoms, symptoms of depression, and burnout. Most of the scales for the psychosocial factors and MHPs included three or four items, but two scales – predictability and work versatility – included only two items. All items were scored from 0–100 and four response options 0, 33.3, 66.7 and 100, to make the scoring on the different scales comparable (Pejtersen et al., 2010). The total score on a scale was the mean of the scores of the individual items.

3.3. Analysis

Statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS Statistics 24.0), using the T-test and Bonferroni correction. Standard deviation and Cronbach's alphas for self-reported psychosocial factors and mental health problems were calculated. Bonferroni correction was used to account for multiple testing problems.

4. Results

Our results show that in Estonian nursing homes, psychosocial hazards were assessed as an actual problem with emphasis on work insecurity, conflict between work and family life, role conflicts, quantitative demands, low influence, low trust level and low social inclusiveness (Table 1). Workers often feel a conflict between work and their private life; work takes so much time that it has a negative effect on family life; workers are worried about becoming unemployed or being transferred to another job against their will. Sometimes they have to do unnecessary things at work, and contradictory demands may pose a role conflict; there is often no time to do the work properly and with a good quality; the workload might be unevenly distributed and at the same time, it is not possible to influence the amount of work assigned to them.

Low mean scores were recorded for the meaning of work, role clarity, social relationships at work, which indicate that those aspects are not considered as psychosocial problems – workers perceive high meaningfulness of their work, the work has clear objectives, and the workers know what they are responsible for and what is expected of them at work. Table 1 presents the mean scores, standard deviations and Cronbach's alphas for self-reported psychosocial factors and mental health problems.

Table 1. Descriptive statistics for work-related psychosocial factors and mental health problems in Estonian nursing homes

Psychosocial factors and MHPs (scale)	Number of items	Mean*	95% Confidence Interval of the Difference		SD	Cronbach's alpha
			Lower	Upper		
<i>Demands at work</i>						
Quantitative demands	3	50.7	47.9	53.4	25.8	0.858
Work pace	3	30.1	28.1	32.2	19.0	0.849
Cognitive demands	4	29.1	27.6	30.5	13.5	0.676
Emotional demands	4	27.1	25.5	28.7	15.0	0.712
Demands for hiding emotions	3	26.4	24.2	28.6	18.3	0.739
<i>Work organisation and job contents</i>						
Influence	4	50.3	47.9	52.7	20.0	0.777
Possibility for development	4	29.6	27.9	31.3	16.0	0.761
Meaning of work	3	17.1	15.6	18.7	14.4	0.836
Commitment to the workplace	3	38.1	36.1	40.1	18.8	0.575
<i>Interpersonal relationships and leadership</i>						
Predictability	2	33.3	31.2	35.4	19.7	0.725
Rewards	5	28.2	26.5	29.9	15.6	0.853
Role clarity	3	19.0	17.4	20.6	15.1	0.848
Role conflicts	4	52.2	49.7	54.6	22.7	0.835
Quality of leadership	4	35.1	33.1	37.1	18.7	0.848
Social support from colleagues	3	25.5	23.7	27.3	16.8	0.763
Social support from supervisor	3	29.7	27.6	31.8	19.6	0.827
Social relationships at work	3	19.0	17.6	20.5	13.6	0.774
<i>Values at the workplace</i>						
Trust	7	47.3	45.6	48.9	15.0	0.622
Justice and respect	4	37.3	35.4	39.3	18.3	0.853
social inclusiveness	3	39.9	37.5	42.3	22.8	0.67
<i>Adequate work organisation</i>						
Insecurity	4	75.4	73.0	77.7	2.4	0.839
Satisfaction with work	4	24.9	23.4	26.4	14.1	0.823
Work-Family balance	3	62.3	59.4	65.1	26.7	0.839
Conflicts of the family and work	2	80.2	77.9	82.6	22.1	0.828
<i>Mental health problems</i>						
Stress	4	69.1	67.2	71.0	17.8	0.845
Somatic symptoms	4	79.4	77.9	80.9	14.3	0.641
Symptoms of depression	4	77.1	75.5	78.7	15.3	0.736
Burnout	4	63.5	61.2	65.8	21.5	0.904

*Mean - Single item mean of the scale can be calculated by dividing the scale mean with the number of items in the scale. Abbreviation: SD – standard deviation.

Source: composed by the authors

Table 1 presents the descriptive statistics for self-reported psychosocial factors and mental health problems. The mean scores for four mental health problems (stress, burnout, somatic and symptoms of depression) are relatively high – ranging from 63.5 to 79.4. Those scores indicate that workers generally perceive high work-related stress, high burnout levels (workers have felt worn out, physically and emotionally exhausted), physical health symptoms such as headaches, stomach aches and/or tension in various muscles and symptoms of depression such as continuous negative feelings, lack of self-confidence, and lack of interest in everyday things.

The majority of the scales showed satisfactory Cronbach's alphas, which ranged from 0.904 to 0.712 on the scales for psychosocial work characteristics and mental health problems. For care workers, the following scales had Cronbach's alphas coefficients of less than 0.700: commitment to the workplace (0.575), social inclusiveness (0.670), and somatic symptoms (0.641). Cronbach's α is an estimator of internal consistency and provides an assessment of questionnaire consistency, and values may approach one, which means good reliability or towards zero which means poor reliability.

Table 2. Cross-sectional correlation analysis for psychosocial hazards and mental health problems

Psychosocial factors (scales)***	Burnout	Stress	Depressive symptoms	Somatic symptoms
<i>Demands at work</i>				
Quantitative demands	-0.229**	0.055	0.015	-0.01
Work pace	-0.005	0.071	-0.012	0.016
Cognitive demands	0.108*	0.082	0.093	0.083
Emotional demands	0.201**	0.169**	0.174**	0.226**
Demands for hiding emotions	0.190**	0.051	0.118*	0.124*
<i>Work organisation and job contents</i>				
Influence	-0.141**	-0.281**	-0.118*	0.002
Possibility for development	0.124*	0.139*	-0.023	0.033
Meaning of work	-0.043	-0.096	-0.052	-0.004
Commitment to the workplace	-0.287**	-0.165**	-0.161**	-0.098
<i>Interpersonal relationships and leadership</i>				
Predictability	-0.150**	-0.131*	-0.046	-0.024
Rewards	-0.427**	-0.186**	-0.227**	-0.155**
Role clarity	0.102	-0.093	-0.049	0.021
Role conflicts	-0.183**	-0.077	-0.067	-0.016
Quality of leadership	-0.247**	-0.217**	-0.183**	-0.178**
Social support colleagues	-0.08	-0.105	-0.168**	-0.035
Social support management	-0.183**	-0.174**	-0.114*	-0.098
Social relationships at work	0.130*	-0.055	-0.136*	0.026
<i>Values at the workplace</i>				
Justice and respect	-0.095	-0.099	-0.036	-0.039
Social inclusiveness	-0.178**	-0.072	0.005	-0.168**

*Statistically significant p-values ($p < 0.05$),

**Statistically significant p-values ($p < 0.01$),

*** Numerical values based on Pearson's r correlations adjusted using sequential Bonferroni correction

Source: composed by the authors

Our study results show that only three of the psychosocial factors (rewards, emotional demands and quality of leadership) affect the mental health of care workers (Table 2). The items Rewards and Quality of leadership show a negative correlation with all of the mental health problems. The factor of emotional demands shows a positive correlation with burnout, stress, somatic symptoms and symptoms of depression. Our results also indicate that the good organization of work and meaningful job content contribute significantly to the positive mental health of care workers.

Based on the current study, we can conclude that care workers committed to the workplace have negative correlations with stress and burnout. Our results also show that interpersonal relationships and leadership are important aspects in psychosocial risk management in healthcare: workers expect quality management and social support from their supervisors. Our findings show that stress and burnout have a negative correlation with social support from supervisors as well as quality of leadership. In addition, social inclusiveness has negative correlations with burnout and somatic symptoms, which are the predictable components of depersonalization and lack of commitment and motivation.

Table 3. Comparison of psychosocial factors and mental health problems between Estonian care workers, Estonian nurses, Danish nurses and US nurses

Psychosocial factors	Estonia Care workers		Estonia Nurses		Denmark Nurses		United States Nurses	
	M	95% CI	M	95% CI	M	95% CI	M	95% CI
Quantitative demands	51	48-53	32	31-34	51	49-53	61	60-63
Role conflicts	52	17-21	36	34-38	41	39-44	56	52-57
Influence	50	48-53	33	31-35	46	44-47	46	44-47
Demands for hiding emotions	26	24-29	73	72-75			70	62-77
Rewards	28	27-30	58	55-60			59	57-60
Quality of leadership	35	33-37	60	57-62			60	57-63
Social support from colleagues	25	24-27	60	58-62			58	56-60
Social inclusiveness	40	37-42	61	60-63			62	59-64
Mental health problems								
Stress	69	67-71	40	39-43			38	35-40
Symptoms of depression	77	75-79	31	29-33			29	25-30
Burnout	63	61-66	45	43-47			43	39-45

Source: Freiman and Merisalu, 2015 edited by the authors

The comparison of our data with those from previous research (Table 3) and the experiences in other countries show that the mean score for mental health in Estonian nursing homes is higher than previous results in Tartu University hospital and in other countries (ranking from 69 to 77 on a 100-point scale) (Freiman & Merisalu, 2015). The care workers highlight that there are high quantitative demands at their workplace. Similar results were obtained among Danish nurses; however, US nurses reported even higher quantitative demands. The previous study among Tartu University nurses in Estonia indicates the lowest values. An interesting finding is the considerably lower scores for the demand to hide emotions, rewards, quality of leadership, social support from colleagues and

social inclusiveness among care workers in Estonian nursing homes compared to the US. Yet, Estonian care workers are influenced by role conflict and an inability to have any influence at their work compared to Estonian nurses. The results indicating the influence Estonian nurses have on their work are similar to US and Danish nurses; however, the results are considerably higher for role conflicts among US nurses and considerably lower for role conflicts among Danish nurses. Compared to the experiences of other countries, Estonian care workers are not socially included, which is an important finding. This may refer to the exclusion of representatives of this profession and may also give a rise to bullying at work.

It can be concluded that care workers in Estonia suffer from somatic symptoms and symptoms of depression, stress and burnout, they cannot influence their work, have high quantitative demands, and are not included in the activities of the organization, which in turn refers to a high amount of psychosocial factors in the work environment, which is one of the indicators of poor safety management in the organization.

5. Discussion and Conclusion

Based on the research gap, the purpose of this study was to explore relationships between work-related psychosocial risk factors and the following four mental health problems among care workers: stress (Li et al., 2010), burnout (Garret, 2008), somatic symptoms and symptoms of depression (Cleary et al., 2010) in Estonian nursing homes. To achieve our goal, three research questions were explored. The answer to research question 1 enables us to identify risk factors in the psychosocial work environment that have a negative influence on the mental health of healthcare workers.

Based on our findings, factors including low quality of leadership, high quantitative demands, employee role conflicts, low dedication among workers, physically and mentally challenging work, and stress at work have been identified as prevailing in Estonian nursing homes. Similar results have previously been found by Li et al. (2010). To answer research question 2, we explored how the mental health of nurses can affect patient safety and the quality of the services provided. It was found that high standards and role conflict in nursing homes is problematic for care workers and influences their mental health. It is common for Estonian care workers to have an excessive workload and for them to complete assignments that do not correspond to their qualifications, such as medical activities (Sepp & Tint, 2017). Studies have demonstrated that the frequency of mistakes is increasing; for example, regarding the administering of medication, if the employee is emotionally or physically exhausted, when they are not satisfied with their job and have a low level of dedication (Freiman & Merisalu, 2015; Ulrich & Kean, 2018).

The results of our research demonstrate that in terms of the prevention of mental health problems among care workers it is necessary to understand the importance of managing stress and preventing burnout syndrome. Our results revealed the highest level of those two psychosocial factors of mental health when compared with a previous study conducted in Estonia (Seppo et al., 2010). The risk factor “work organization and job content” shows that the workers perceive the need to influence their work and to be included in the activities of the work organization, including safety planning. Earlier studies have shown that inclusion in the decision-making process and an opportunity to influence their work increases dedication, motivation and decreases risk behaviour (Li et al., 2010). Worker involvement in

various health and safety activities depends on the organizational management and safety climate in the organization (WHO, 2014). Risk behaviour is common practice in healthcare, and overtime hours caused by a chronic lack of staff are one of the risk factors, which influences the mental and physical health of the workers. Previous studies have demonstrated that if the organization fills vacancies overtime shifts, this will lead to chronic fatigue among the workers, which correlates with the likelihood of making medical errors. Studies show that having 24-hour-shifts without resting is equal to an alcohol concentration in the blood of 0.10 per mille (Garret, 2008). Rodrigues et al. (2017) point out that employees working a shift more than 12 hours have three times greater probability of making mistakes than those working 8.5 hours a day. In addition, for those working more than 40 hours a week, the risk of errors increases by 46%. Further, the same authors emphasize that long working hours with a heavy workload cause physical and psychological fatigue, which has a direct negative influence on the quality of services offered to the patients through weak patient safety.

Research question 3 was about measures to prevent psychosocial risk factors. Based on results from the current study, several safety measures are proposed in order to reduce the influence of the psychosocial risk factors of the working environment on the mental health of care workers. According to the results of our research, the organization of work is an indicator of proactivity in regard to mental health and of the effective management of the organization. In addition, earlier results have shown that the organization of work, support at work, relations with colleagues and violence or bullying at work have a major influence on employees. When planning the organization of work, the needs and peculiarities of the worker should be taken into account. Therefore, an important role is played by the competence and training of the leaders (Mints-Binder, 2014). The leaders are responsible for preserving the mental health of the employees through the work environment and relations at work that are respectful and encourage good relations, providing a balance between effort and reward and recognizing the employees for their efforts (Freimann & Merisalu, 2015; Rahman et al., 2017). The employees expect support from the management; good relations at work are an important indicator from the point of view of reducing mental health risks, and colleagues and leaders both play an important role in this. Social inclusion is also a risk factor influencing the mental health of care workers, which may carry aspects related to violence and bullying at work. According to the structure and specifics of the organization, care workers are one of the lowest levels and may perceive exclusion by other members of the organization. The results of our research show that care workers perceive social exclusion; therefore, the management of the organization should ensure that all the members of the organization feel safe and necessary in the institution. It is important to respect every professional position and each member of the organization must have their line of responsibility, upon which the quality of patient-centred service depends. Earlier studies have shown that a lack of support from the organization may cause burnout and stress at work, and influence job satisfaction and motivation among the employees (Dehring et al., 2018).

It can be concluded that the work environment and its creation have an influence on the mental health of the employee through different situations and circumstances. This research has contributed to the understanding that a serious problem prevailing in nursing homes is the perception among the employees that they cannot influence their work, which is demotivating and evidently also affects their level of dedication. Attention should be paid to the organization of work and establishing relations and communication within the organization. It is important to be aware that errors are a part of healthcare organizations

and it is common for a person to make mistakes in order to address these issues, so as to avoid mistakes in the future instead of blaming an employee. A worker should not develop a feeling of guilt, but rather, through support from the organization and learning, the development of the employees should be ensured and the problems of mental health prevented (Doss-McQuitty, 2016; Mira et al., 2015). Management of the organization, including safety management should be proactive and oriented towards preserving the health of the employees and offering patient-centred services.

The current study has some limitations that need to be addressed. The quantitative data were self-reported, which can be affected by information bias and recall bias, especially in relation to reporting such delicate and sensitive data as health symptoms and psychosocial risks factors (Barling, Loughlin & Kelloway, 2002; Pransky et al., 1999). It should be mentioned that the main limitation of this research is the sample that concentrates solely on the assessment of the perceptions of care workers. In future research, psychosocial risk management should also be investigated. In addition, it is essential to explore how the organizational safety management system addresses psychosocial risk management and is integrated into other organisational processes within the healthcare organisation. A safety management system including the objective measurement of psychosocial risks in healthcare should be investigated in detail. In addition, future research should explore the planning of the proactive aspects and good practices in the management of psychosocial risks in the healthcare sector.

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Reviewing Entrepreneurship Education Projects and their Impact

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Abstract

Entrepreneurship education (EE) has often been evaluated from the perspective of students and teachers. Not many studies have been conducted from the perspective of convergent EE path models and broad target groups. It has been understood that the systematic evaluation of entrepreneurship education is still missing. The aim of this article is to review entrepreneurship education projects and their impact based on Gibb's entrepreneurship education framework including entrepreneurial behaviours, attributes and skills (BAS) using a large questionnaire survey, interviews and workshops with project participants. Based on a broad target group and extensive data, recommendations are made for EE from the perspective of the target groups and an EE path for all school levels, and for teacher training. The article contributes also to providing a methodology for the systematic evaluation of EE based on the BAS framework.

JEL classification code: I23, L26; M53

Keywords: Entrepreneurship education, evaluation, entrepreneurial pedagogy, levels of education

1. Introduction

The systematic evaluation of entrepreneurship education (EE) projects and actions is extremely important to understand and open up the real impact of EE projects. Projects and activities in EE have been occurring for a long time, albeit with rather minimal evaluation. Entrepreneurship education has often been evaluated from the perspective of students (e.g. Gibb, 2005b; Fayolle & Klandt, 2006) and teachers (e.g. Gustafsson-Pesonen & Remes, 2012; Ruskovaara & Pihkala, 2015). The problem is that there are few studies exploring a systematic EE path model considering a broad target group (e.g. Fayolle, 2007; Fayolle & Gailly, 2008; Fayolle & Klandt, 2006). According to Klapper and Farber (2016), a systematized evaluation of entrepreneurship education is still missing.

There are several other reasons why the evaluation of EE projects are necessary. For example, Patton (1982, 1997, 2002, 2013) has stated that: “if evaluation is not done, success cannot be distinguished from failure. If success or failure is not pointed out, we cannot learn from them, either. If the results are not evaluated and monitored accurately, it is difficult to achieve more wide-ranging support for the measures”. It has been said that the meaning of evaluation is defining of the value of the object or activity under examination through evaluative and interpretative analysis. Aims, demands and the criteria against which the issue under evaluation is compared, take a central position. The meaning of evaluation is to yield diverse information about the value, strengths and areas for improvement for the activity, and its aim is the development of the focal activity (FEEC, 2004).

In Finland, EE projects have been conducted since 1995 within EU membership. An extremely large number of EE projects have been produced with the help of EU financing. The projects have been used as tools for promoting EE research. The strategy of EE projects has crystalized into nine dimensions: government program policy definitions, central administration norm control and information control, teacher training and continuing education for teachers, developing EE pedagogy and EE readiness, and development projects for study and evaluation. When the EU financing season of 2007–2013 reached the halfway point, there was a need to make a systematic evaluation of ongoing EE projects carried out in the 2000’s. It was necessary to open up good practices and learn from practices so that developing EE projects and systematic EE paths were possible. Hence, in Finland, the evaluation of national level EE projects has been carried out through 2000–2010 based on the Ministry of Education and Culture and ESF needs. The wide and systematic EE project evaluation had not been carried out previously, which was the reason why the Finnish Ministry of Education and Culture commissioned systematic evaluation research (OPM, 2009).

The aim of this paper is, on the one hand, to unpack the best practices from the evaluated EE projects and to build a methodology for the systematic evaluation of EE projects, and on the other hand, to offer recommendations for teacher training and continuing teacher training and to create the systematic EE path for different school levels.

The research questions are: 1) what kinds of qualitative and quantitative best practices can be identified and systematically evaluated in EE projects, 2) what kinds of EE methods and EE pedagogy have been tested during the EE projects, and 3) what kinds of solutions are there to create systematic EE paths for teacher training and for all school levels.

The theoretical basis of this study has been built on Gibb’s (2005ab) EE framework including entrepreneurial behaviours, attributes and skills (BAS). This also creates the basis

for the development of the methodology; that is, a model for the systematic evaluation of EE projects based on the BAS framework.

With this article, we will discuss the systematic evaluation of qualitative and quantitative successes and permanent regional changes related to the theme of EE, and make recommendations in regard to EE methods, for teacher training and a path for EE for the different school levels in Finland. All data is based on a broad questionnaire survey, interviews and workshops on EE research in Finland (Gustafsson-Pesonen & Kiuru, 2012). The target groups for this evaluation are EE project staff, teachers and students who participated in EE projects and actions in primary, secondary, and vocational schools and in higher education through 2000–2010. Based on a broad target group and extensive study data, it is possible to systematize the evaluation and create a systematic EE path based on Gibb's framework of EE (Gibb, 2005b; 2006). It is possible to offer recommendations for EE projects, education and actions tailored for the perspective of the target groups. It is also possible to try to create an EE path for all school levels because of this broad target group and large study.

The contribution of this paper focuses on building a methodology (a model) for the systematic evaluation of EE projects and actions based on the BAS framework. This evaluation has opened up best practices in EE methods and the EE path to teacher training and for all school levels. The study is based on “Ideoita ja oivalluksia yrittäjyyskasvatukseen YKOONTI” research data (Gustafsson-Pesonen & Kiuru, 2012), which was a national level evaluative study on EE projects through 2000–2010. The study methodology was based on EU project evaluation and especially ex post evaluation. The research was carried out from September 2010 to October 2012. It is important to understand that the project was the first national level study of EE project evaluation in Finland. Prior to this study and since, no broad evaluative studies on EU EE projects in Finland have been conducted.

The paper is built around four sections. After the introduction, we present the framework of the evaluation research and the framework of the study. In chapter three, the methodology and research data for the study is described. Chapter four, presents the results of the study. At the end of the paper, there is a summary and recommendations for further study.

2. The Framework of the Entrepreneurship Education Evaluation Study

2.1. The Context of Entrepreneurship Education

The context of entrepreneurship education (EE) has been studied since the 1970s and 1980s. Gibb (1993) argued that EE and the term entrepreneurship should not only be used in business studies but entrepreneurship should be defined as the ability to operate confidently in situations of uncertainty. Arpiainen (2019) argues that entrepreneurship and EE should be included in all educational subjects through a wider understanding of EE. The wider understanding of EE should be seen as including opportunity recognition, learning from failures, risk-taking, learning by doing, getting feedback, borrowing ideas, inventing solutions, interacting with colleagues, personal interaction under pressure, and problem solving (Gibb, 2005ab, 2006, 2010). Quite often entrepreneurial pedagogy (e.g. Arpiainen, 2019; Fayolle & Gailly, 2008; Kajanto, Kyrö & Saarelainen, 2001) is seen as part of business studies and teaching for entrepreneurship is often used in business terminology and methods rather than according to this broader understanding. This is a problem if we are trying to

help and encourage our target group (students, teachers, potential entrepreneurs) to do things in an entrepreneurial way or to use entrepreneurial pedagogy (Arpiainen, 2019; Gibb, 2005ab, 2006).

The term “entrepreneurial pedagogy” began to emerge in EE research in the 1990s (e.g. Gibb, 1993; Deakins & Freel, 1998; Young & Sexton, 1997). After that, several EE scholars have studied entrepreneurial pedagogy and its expression (Arpiainen, 2019; Diensberg, 2008; Fayolle, 2007; Gibb, 2005ab, 2006, 2010; Harrison & Leitch, 2005; Hägg, 2011; Hägg & Kurczewska, 2016; Hytti & O’Corman, 2004; Kyrö, Seikkula-Leino & Mylläri, 2011; Lackeus, 2014, 2015; Politis, 2005; Rae, 2000, 2004ab, 2005; Rae & Carswell, 2001;). For example, according to Rae and Carswell (2001), human beings are the most important instrument when talking about entrepreneurship because people are the leaders of the entrepreneurship process. Diensberg (2008) argues that the growth and support of individualism when talking about entrepreneurship is the best approach to entrepreneurial pedagogy because it is important to learn to do things in an entrepreneurial way and self-confidently (Arpiainen, 2019; Fayolle, 2013; Gibb, 2005ab, 2006, 2010; Lackeus, 2014, 2015). Diensberg (2008) has also argued that classroom teaching should be forgotten because there is a need, for example, for learning by doing, learning from each other and learning from failures if we want to understand the breadth of EE.

Gibb (2005ab, 2006, 2010, see also Arpiainen, 2019; Fayolle, 2013; Lackeus, 2014, 2015) has stated, that entrepreneurial pedagogy grows from the essence of entrepreneurship, as entrepreneurship education is about: a) learning for entrepreneurship, b) learning about entrepreneurship and c) learning through entrepreneurship. He argued that entrepreneurial pedagogy is more action learning than simply listening. It is experimental learning, teamwork and learning by doing. According to Fayolle (2007, 2013), learning by doing is the best way to practice entrepreneurship. Scholars (e.g. Gibb, 2010; Hytti & O’Gorman, 2004; Lackeus, 2014, 2015; Seikkula-Leino, Ruskovaara, Ikävalko, Mattila & Rytkölä, 2010) have argued that teachers should be able to offer students an environment where they can feel, see, communicate and learn how to organize things.

Entrepreneurship education and learning enables career planning, offers an entrepreneurial way of looking at and carrying out things, and with the help of this, we can characterize teaching and learning (Arpiainen, 2019; Berglund & Johansson, 2007; Fayolle, 2007; Gibb, 2010; Hägg, 2011; Hägg & Kurczewska, 2016; Hytti & O’Corman, 2004; Kyrö & Carrier, 2005; Kyrö et al., 2011; Lackeus, 2014, 2015). According to several researchers (Arpiainen, 2019; Fayolle, 2007, 2013; Gibb, 2005a, 2010; Hägg, 2011; Hägg & Kurczewska, 2016; Lackeus, 2014, 2015; Seikkula-Leino, 2007; Steyaert & Katz, 2006), the pedagogy used in entrepreneurship education must be built on the active role of the learners in the learning process, and through that, non-traditional teaching methods. For example communality, problem solving, learning from failures, creativity and reflection have to be visible in the realization of entrepreneurship education.

Recent studies in favour of further strengthening EE and entrepreneurial pedagogy assert that opportunity recognition, learning from failures, risk-taking, learning by doing, responding to feedback, borrowing ideas, inventing solutions, interacting with colleagues, personal interactions under pressure and problem solving should be emphasized over classroom teaching (Arpiainen, 2019; Fayolle, 2013; Hägg, 2011; Hägg & Kurczewska, 2016; Kyrö et al., 2011; Lackeus, 2014, 2015; Seikkula-Leino, 2007; Srivastava & Thomas, 2017). Recently, EE has been opened up in terms of not only being about creating business plans and starting new ventures, but it is also about creativity, innovation, and growth, a way of

thinking and acting relevant to all parts of the economy and society as well as the whole surrounding ecosystem (Volkman & Audretsch, 2017).

Based on the EE and entrepreneurship pedagogy studies mentioned above, systematic EE evaluation and systematic EE path should include a deeper understanding EE. In this study, the author will try to connect these different opinions on EE with the systematic evaluation of EE projects and creating an EE path.

2.2. The Evaluation Experience of Projects

The report by the European Directorate General for Enterprise and Industry (European Commission, 2012) – “Effects and Impact of Entrepreneurship Programmes in Higher Education” – highlighted that it is important to understand the effectiveness of EE. The report mentions that from among the few studies connected to EE evaluation, many of them are from the US context. The report underlined that entrepreneurship in education can make a difference and it can potentially impact the intentions of target groups to create a new venture, as well as their entrepreneurial competence and employability. It also noted that EE will increase social inclusion by adding to the number of both commercial and social entrepreneurs, which, as the report suggests, creates positive spin-off effects for both society and economy. Fayolle and Gailly (2015) agree with these arguments and it is possible to see these in European Commission (2017) reports.

In the current study, which focuses on project evaluation, we also have to understand the reason for evaluating EU projects. At the Commission level, the briefing for the evaluation of EU projects states that the function of evaluation is to analyse how well the project answers the need it is carried out for, in other words to evaluate the results and effects of the project. The execution of the evaluation depends, at which stage evaluation is done, and who does the evaluating. The aim of evaluation is also to yield information for the planning of the project, to assist in the efficient distribution of resources and to improve the quality of the project (European Commission, 2004).

Evaluation and its effects can be examined at different times, according to whether it concentrates on ex nunc, ex ante or ex post evaluation (European Commission, 1997). Project evaluation focuses mainly on ex post evaluation because very often project evaluations are conducted after the project has ended. Ex post evaluation examines the project as a whole and concentrates on the results, effectiveness and efficiency of the project. Ex post evaluation also pays attention to the permanence of the results and the question of which factors have led to successes and/or failures (European Commission, 2004).

Ex post evaluation examines a completed project, but it can also have a significant role in the preparation of follow-up projects to be carried out in the future (Keränen, 2003). Ex post evaluation can therefore also be seen as a learning and teaching process to improve future activities. At best, the organization that carried out the project can learn from the evaluation because it yields generally applicable information that can also be utilized by others planning or carrying out similar projects. Consequently, by carrying out ex post evaluations, good practices can be identified and brought more extensively into use (Keränen, 2003).

Three factors are emphasized by Neuman et al. (2013) in the evaluation process. The first factor is the *commitment of the organization and its stakeholders to the evaluation process*. They refer to Patton (1982, 1997, 2002, 2013), who claims that stakeholder involvement during the different stages of an evaluation promotes the use of the evaluation and gives

them a sense of ownership. Patton's model therefore maintains that stakeholders should be involved in planning the evaluation, designing the tools to be used and planning its implementation. Neuman et al. (2013) also stated, referring to Chelimsky (1977) that it is not only the quality of the findings that affect their application, but also the involvement of a key decision-maker who is interested in the evaluation and committed to its application and implementation. The second factor, according to Neuman et al. (2013) is the *need for an evaluation in the organization and the information's degree of relevance*. The chances that the evaluation findings will be used increase in parallel with the increased relevance of the information and the way it meets the needs of the organization. In other words, if the organization does not see the evaluation as relevant, it is less likely to use its results, and vice versa (e.g. Cox, 1977). The third factor is the *quality of communications between the evaluator and the organization undergoing the evaluation*. As the quality of the communications between the two parties increases, the chance that the evaluation findings will be implemented will also increase (Greene, 1988; Weiss, 1999). Preskill, Zuckerman and Matthews (2003, cited in Neuman et al., 2013) argue that it is not only the quality of communication, but also the frequency and methods of communication that matter. The results of the evaluation should reveal recommendations for stakeholders and the quality of project actions, and it is possible to highlight recommendations for the development for future actions based on the evaluation results.

Fretschnner and Weber (2013) have conducted evaluation research, and they argue that much work remains to be done. According to them, the first two predominant theoretical models in EE research evolved in the eighties. Fretschnner and Weber (2013) refer to Shapero and Sokol's (1982) model of the entrepreneurial event and Ajzen's (1985) theory of planned behaviour. Furthermore, ever since then, these two approaches have been compared (e.g. Krueger, Reilly & Carsrud, 2000), combined (e.g. Krueger & Brazeal, 1994), and modified (e.g. Davidsson, 1995ab) by several researchers. Fretschnner and Weber (2013) claimed that almost all publications used different evaluation models, constructs, and indicators. To overcome this, they discussed the need for a standard instrument for measuring EE. First, they found that Liñán and Chen (2009) have developed the "entrepreneurial intention questionnaire". Second, they said that different curricular and instructional designs of the "treatment" of entrepreneurship courses further reduce the comparability between studies. Third, according to Fretschnner and Weber (2013) evaluation studies vary considerably in their methodological rigour regarding the use of pre-post designs, control groups, follow-up studies, and controls for self-selection of students into entrepreneurship programmes. In this context, a recent meta-analysis of the impact of EE related outcomes by Martin, McNally and Kay (2012) showed that a large number of studies do not meet their inclusion criteria due to methodological issues and the fact that studies with poorer quality standards overestimate the effects of EE. The evaluation of EE projects should focus not only on the perspective of the students in regard to EE, but also on that of teachers, staff, and stakeholders.

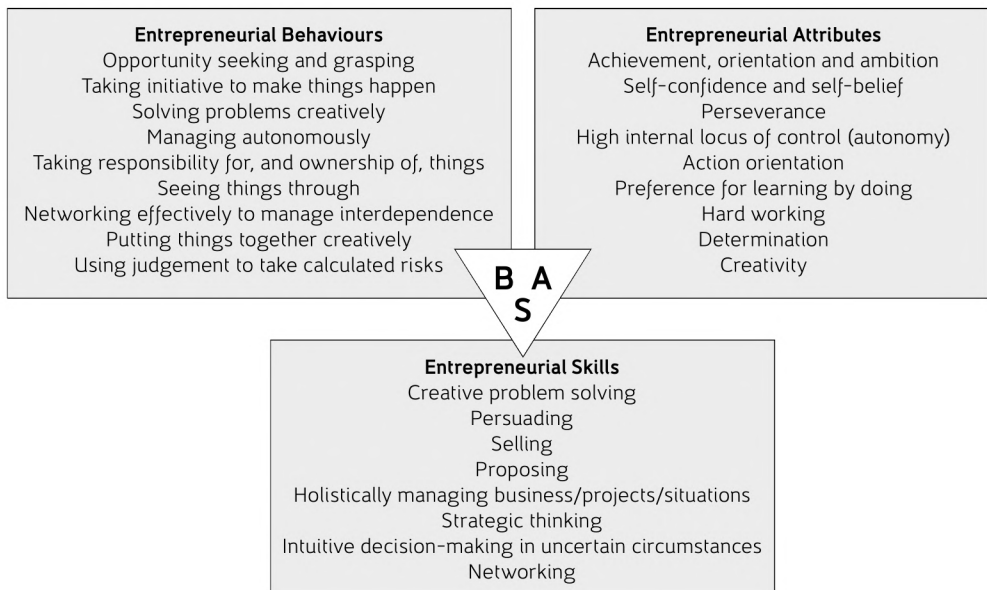
This study is based on EE project evaluation and focuses on ex post evaluation; therefore, it was possible to yield information for the planning of the project, to assist in the efficient distribution of resources and to improve the quality of the project. This study, has therefore, opened up the usefulness, feasibility and applicability concepts of evaluated EE projects. The results of this study provide recommendations to stakeholders and show the quality of EE actions and projects in Finland. The results also highlight recommendations for EE development at different school levels and teacher training based on the evaluation results.

The evaluation study of EE projects focuses not only on the student perspective on EE development, but also on that of teachers, staff, and stakeholders.

2.3. The Framework of Entrepreneurship Education Evaluation – Behaviours, Attributes and Skills

This study was built on Gibb's (2005ab) framework of entrepreneurial behaviours, attributes and skills (BAS), which is suggested as a better way to understand and develop EE if we want to support our target groups and their actions in a more active and entrepreneurial way (Gibb, 2005b). Klapper and Farber (2016) have also more recently confirmed that EE evaluation criteria should combine measuring knowledge, specific skills or tools, levels of interest, awareness or intention, degree of participation in the classroom, and motivation. The reason for the selection of Gibb's BAS framework for EE evaluation is that it is quite efficient and well tested (e.g. Arpiainen, 2019; Braun, 2008; Diensberg, 2008; Fayolle, 2007; Fayolle, Gailly & Lassas-Clerc, 2006; Fayolle & Klandt, 2006; Fayolle & Gailly, 2008; Gibb, 1993, 2005ab, 2006; Kyrö, 2005; Klapper & Farber, 2016; Kyrö, Speer & Gustafsson-Pesonen & Kiuru, 2012) and includes all three points of view for starting up a business or for achieving an entrepreneurial mindset when working as an employee. The BAS framework was tested and modified in a previous EE training evaluation study (Gustafsson-Pesonen & Remes, 2012). Gibb's BAS framework was presented and adapted by the author (see also Gustafsson-Pesonen, 2014) (see the Figure 1). Gibb's BAS framework has also subsequently been recommended by Klapper and Farber (2016) and Arpiainen (2019). The BAS framework collects all relevant deeper understandings of EE points of view and is justified when building up a methodology for EE project evaluation. In Finland, the EE guidelines which are used in practice and have been prepared by the Finnish Ministry of Education and Culture 2009 (OPM, 2009) are also based on the BAS framework by Gibb (2005ab).

Figure 1. Entrepreneurial behaviours, attributes and skills (BAS) by Gibb (2005b), compiled by the author (Gustafsson-Pesonen, 2014).



One goal of the Ministry of Education is to strengthen the entrepreneurial attitude of individuals and to increase the attractiveness of entrepreneurship as a career choice. The strengthening of entrepreneurship encompasses the entire education system. In the sphere of authority (the Ministry of Education and Culture), the aims of EE are related to developing a participative, active citizenship and strengthening creativity and innovation in education. It has also said that developing a nationally and regionally positive entrepreneurial culture and attitudinal atmosphere during leisure time and working life, as well as, starting new entrepreneurship, developing working entrepreneurs and their enterprises and supporting ownership changes, are important issues.

The research model based on the BAS framework is used for evaluating EE projects and actions. The questionnaire and thematic interviews were built using the BAS framework to help evaluate the impact of project activities on the entrepreneurial behaviours, attributes and skills of the target groups. The results of the research contribute to the development of EE in Finland.

3. Methodology

3.1. Study Design

The main idea of EE project evaluation was to gather and evaluate the qualitative and quantitative results of partly ESF-funded national projects related to the theme of entrepreneurship education. The reason for the study was to create a model and recommendations for linking entrepreneurship education to all school levels, to teacher training and teacher continuing education. The far-reaching aim was to find new innovative entrepreneurial pedagogies for use by teachers and educators. The contribution of this paper focuses on building up a methodology for the systematic evaluation of EE projects and actions in the years 2000–2010 based on BAS.

At the beginning of the project, a steering group was established, consisting of two EE professors from Finland, one representative of the Ministry of Education and Culture, one representative of the Federation of Finnish Enterprises and two researchers. It is important to note that during the years 2000–2010, altogether 154 projects on entrepreneurship education have been carried out (based on the information given by the Ministry of Education and Culture). Projects which supported a deeper understanding of EE were chosen for the study. The selection of projects was the task of the steering group members, who decided which projects to take as the object of the study and to identify the target group of the project. Altogether 52 national EE projects supported by the EU were chosen. The target groups were EE project staff, teachers and students who participated in the EE project actions in primary, secondary and vocational schools and higher education institutions, and other interest group/stakeholders.

A request was sent to the contact persons in the projects to supply the email addresses of the staff, representatives of the target groups, representatives of stakeholders and representatives of other interest groups. Altogether, a total of 1,374 email addresses were received from 30 different projects, of which 1,160 were active (appendix 1). No contact information was available from 12 of the selected EE projects. There were several reasons for this: project staff had left, contact information for some projects was not available, and in

some cases little to no information about the projects was available. As a result, it was only possible to evaluate 30 EE projects – an estimated 58% of all projects were included in the study. It is possible to say that these projects represented all the financed EU projects based on the BAS framework in Finland.

The quantitative data was collected at the beginning of the study using a survey in the webropol environment from February 2011 to May 2011. The number of respondents altogether increased after two reminder rounds to N=471 and the response rate was over 40%. The gathering of the answers can be considered rather successful. Whole study group was 1,160 and N=471. Appendix 1 presents the characteristics of the samples by project; Appendix 2 includes the webropol questionnaire. The research data was collected from national level EE EU project staff, participants, stakeholders, teachers and students.

After the webropol survey, qualitative research was carried out including 72 thematic interviews by phone. These 72 interviewees also previously answered the survey. Projects where there was more than one respondent on the webropol survey were selected for the thematic interviews. The study population consisted of project actors, target and interest groups/stakeholders from the EE projects. Thematic interviews, which were based on the BAS framework, were conducted by phone (N=72) from April 2011 to June 2011. The thematic interviewed projects as well as the thematic questions are listed in Appendix 3.

Evaluation workshops were organized three times during the EE project data gathering phase. These full-day workshops were in March 2010, May 2011 and December 2012. The workshop participants, working in team discussions, wrote their ideas and recommendations for/about the questions on blank pieces of paper.

Discussion themes were:

- How should Entrepreneurship Education be realized at all school levels?
- Ideas for teacher training and teacher continuing education
- Ideas for entrepreneurial pedagogy/methods (e.g. school – enterprise cooperation)

After the workshops, the written materials were collected, read and analysed. The themes which had received the most attention were included to the data. Altogether 90 people participated in the workshops, including members from the steering group and several other organizations. Participants included entrepreneurship teachers, entrepreneurship researchers, project staff, project managers, entrepreneurship developers from different regions, school rectors, education leaders from the regions, representatives of entrepreneurs and others. The list of organizations that participated in the workshops are listed in Appendix 4. The steering group recommended which and how many people should be included in the research, the interviews and the workshops.

3.2. Background of the Respondents

Project and respondent-specific background variables describe the projects in a versatile way (Table 1). In addition, separate projects were used as background variables (projects that got more than three answers). The answers had significant differences for both project and respondent-specific background variables and separate projects.

The results of the project survey are presented below, based on the weighted medians calculated from the distribution of answers attained for each question/question group. The most significant differences discovered in the medians were examined on the basis of project and respondent-specific background variables and projects. Significance was tested by

comparing the median of each background variable (e.g. “large national projects” or “representatives of project staff”) or the answers of a separate project with the background variable in the question or with answers not belonging to the project. The test method was the “Independent Samples T Test”. The significance levels were taken from the row with the supposition that groups that have been compared to each other have different variances (see Table 3 and Table 4).

The significance limits (sig. 2-tailed) were:

Extremely significant *** (0.000–0.001)

Significant ** (0.002–0.004)

Somewhat significant * (0.005–0.009)

Table 1. The background variables: projects and respondents

Project - Background variables	Number of Projects	Answers / projects	
		Respondents	%
The size and location			
Big national level	6	215	46
Big regional and local level	11	174	37
Small regional and local level	13	82	17
The timeframe of project			
Ended, the last period EU programme	14	170	36
Ended, this period of EU programme	5	70	15
Ongoing projects	11	231	49
The location of project management			
Southern Finland	9	156	33
Western Finland	8	174	37
Eastern Finland	9	128	27
Northern Finland	4	13	3
Background variables			
Gender			
Female		279	59
Male		192	41
Age			
under 35		45	10
35–44		146	31
45–54		157	33
55–		117	25
No info		6	1
The respondent's role on the project			
Project staff		65	14
Target group (teacher, student)		209	44
Steering group member		98	21
Interest group/Stakeholder		99	21

Source: author

The background variables of the study group are quite in balance. The study also included big national, regional and small local projects. The group included both projects that had ended and that were ongoing. Projects from everywhere in Finland were selected for the study. Gender distribution is moderately even and the views of representatives of both genders were obtained. The age distribution includes both young people and more

experienced participants. It is important that the majority of the respondents represented the target group but it is also very important that we got the views of project staff, a steering group and other interest groups/stakeholders.

4. Results

4.1. The Importance and Fulfilment of Entrepreneurship Education Project Goals

The evaluation of the importance and fulfilment of the goals of the EE projects was based on Gibb's BAS framework, and eight claims presented to the respondents. These eight claims were: 1. Developing participative and active citizenship, 2. Strengthening creativity and innovation, 3. Developing a pedagogic operations model of EE, 4. Developing a nationally and regionally positive entrepreneurship culture and attitudinal climate, 5. Starting new entrepreneurship, 6. Developing the know-how of participating entrepreneurs and enterprises, 7. Supporting owner changes and 8. Developing learning environments to guide activities in a responsible and entrepreneurial manner (Table 2). The evaluation of the projects examined them according to which goals were the most important and which projects best fulfilled or achieved their goals from the perspective of the interviewees. The projects were grouped according to the goals they considered most important. As a result, the goals "developing a pedagogic operations model of entrepreneurship education" and "developing the learning environments to guide activities in a responsible and entrepreneurial manner", were both considered the most important by seven projects (Table 2). Other objectives related to the content of entrepreneurship and EE were also considered most important by seven projects. Objectives related to the direct supporting/developing entrepreneurship/enterprises "starting a new business" and "developing the know-how of operative entrepreneurs and enterprises" were both considered most important by one project.

Table 2. The projects (marked by numbers), where the goals considered to be the most important and/or best fulfilled by the project according to the answers of the interviewees

	The goal that was considered the most important							
	Developing participative and active citizenship (2)	Strengthening creativity and innovation (1)	Developing a pedagogic operations model of EE (10)	Developing a nationally and regionally positive entrepreneurship culture and attitudinal climate (1)	Starting new entrepreneurship (-)	Developing the know-how of practicing entrepreneurs and enterprises (1)	Supporting owner change (-)	Developing learning environments to guide activities in a responsible and entrepreneurial manner (8)
The goal that was fulfilled best								
Developing participative and active citizenship (2)	21	17						
Strengthening creativity and innovation (1)								25
Developing a pedagogic operations model of EE (10)		23	3, 22, 16, 4, 14					13, 15, 9, 10
Developing a nationally and regionally positive entrepreneurship culture and attitudinal climate (1)				7				
Starting new entrepreneurship (-)								
Developing the know-how of participating entrepreneurs and enterprises (1)						27		
Supporting owner changes (-)								
Developing the learning environments to guide activities in a responsible and entrepreneurial manner (8)	20	30, 2	5, 24		11			8, 1

Note: there were 23 projects, which received more than three answers in the statistics; the names of the projects are in Appendix 1.

Source: author

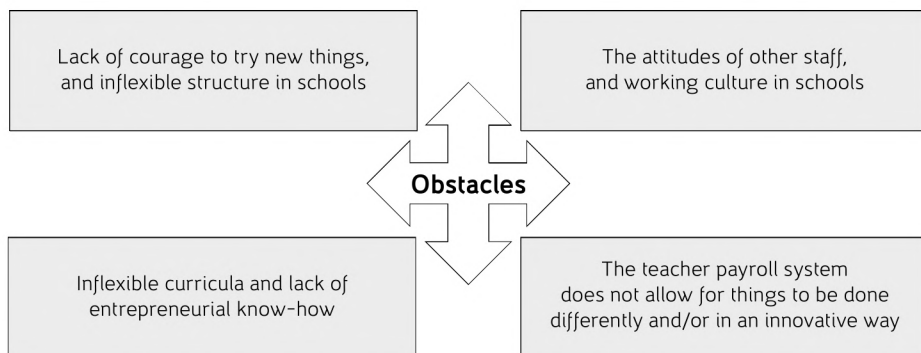
A summary of table 2 indicates that ten projects considered the goal, “developing a pedagogic operations model of entrepreneurship education” the best fulfilled goal. “Developing the learning environment to guide activities in a responsible and entrepreneurial way” was considered best fulfilled by eight projects. Other goals related to the content of entrepreneurship and EE were considered best fulfilled by four projects. Of the goals related to the direct support/development of entrepreneurship/enterprises “developing the know-how of operative entrepreneurs and enterprises” was considered the best fulfilled by one project. Ten of the projects estimated that the project they considered the most important was also considered to have been fulfilled the best. Note that no project considered the goals “Starting new entrepreneurship” or “Supporting owner change” to be best fulfilled. The projects were implemented well according to the BAS framework. It is noticeable that they supported self-directed learning, learning by doing pedagogy and entrepreneurial know-how. The establishment of a company or change of generation was not the focus of the projects, and there were seven projects that could not answer this question. We did not ask why these projects did not answer these questions.

4.2. Obstacles to Using Entrepreneurial Pedagogy

The survey and interviews highlighted that it is quite common for the respondents in the projects to have faced obstacles in their organization or region when they attempted to do things in a new entrepreneurial way. More than 50% of the respondents said that they faced some obstacles.

It is possible to find four main thematic obstacles to using entrepreneurial pedagogy from the survey based on the interview and thematic workshop data (Figure 2). As we can see in Figure 2, it is possible to notice that key elements of the BAS framework are repeated. Flexibility, self-confidence, working together/networking, doing things creatively, problem solving and taking the initiative to make things happen among others are at the heart of the BAS framework. It could be argued that if the obstacles were removed from the schools it might be easier to use and produce EE in the schools based on the BAS framework.

Figure 2. Main obstacles to using entrepreneurial pedagogy, compiled by the author



When the main obstacles were discussed in the workshops, it could be seen that teachers are not supported in applying an entrepreneurial approach or linking these ideas to their teaching (inflexible curricula and lack of entrepreneurial know-how, working culture in schools). According to the interviewees (e.g. teachers and EE researchers), the rectors and directors wanted to link the new entrepreneurial teaching methods to teaching, but they could not get enough resources (money, time or flexibility) for the teachers (inflexible structure in schools, lack of entrepreneurial know-how). Another issue that was commonly brought up based on the qualitative data and workshop meetings, was that cooperation between teachers of subjects is difficult (the attitudes of other staff and inflexible curricula). Very often respondents stated that they met the idea that they had done things alone in the past so why should they have to do things with other teachers of subjects now (the attitudes of other staff and inflexible curricula). Collaboration, information sharing and learning from each other is difficult (the attitudes of other staff, lack of entrepreneurial know-how). Interviewees and people who have participated in the workshops also reported that cooperation between different teachers was not working (inflexible curricula). They said entrepreneurship is also often part of business studies and only recommended and intended for people who want to start their own business (lack of entrepreneurial know-how). Interviewees and participants in the workshops said that the payroll system for teachers does not support entrepreneurial learning (payroll system). To apply the development work necessary to take the new teaching methods into account, their salary (and total remuneration) should be based on overall working hours, and not on the number of teaching, lecturing and preparation hours.

Therefore, a more open and deeper understanding of the BAS framework of entrepreneurial pedagogy is necessary in practice. It might be said that it would be possible to remove the obstacles if there was a deeper understanding and greater use of the BAS framework for developing EE and EE practices in schools.

4.3. The Development of Entrepreneurial Readiness and Skills and Entrepreneurial Pedagogic Know-how

According to the results, the fairly high medians for the propositions related to the development of entrepreneurial readiness and skills indicate that the respondents think that the EE projects that have been evaluated have supported them fairly well (Table 3). This is an interesting and important result when we consider the BAS framework. Quite a number of the evaluated projects have been built around BAS. Significant differences emerged in the answers related to respondent-specific background variables and separate projects. The differences between project-specific background variables remained quite significant, apart from a few exceptions.

Table 3: The propositions related to the development of entrepreneurial readiness and skills and the extremely significant deviations in respect to background variables and specific projects

Propositions about the development of entrepreneurial readiness and skills (medians)	Agree significantly more	Disagree significantly more
My will to experiment with new operational models has increased (3.92)	Female respondent***, Representative of project staff**, project 13***, project 23***	Large provincial and local projects***, Male respondent***, Representative of the instruction group***, Representative of the interest group***
I am still more eager to seize the opportunity (3.86)	Female respondent***, Representative of project staff***, project 13***	Large provincial and local projects***, Male respondent***, Representative of the instruction group***
Marketing and sales know-how add preparedness for working life (3.81)	Ended, this period of EU programme***, Representative of project staff***	
My networking skills have developed (3.76)	Representative of project staff***	
I have obtained tools for creative problem solving (3.70)	Representative of project staff***, Representative of target group***, project 13***, project 23***	Large provincial and local projects***, Representative of the instruction group***, Representative of the interest group***
My skills for making proposals have developed (3.63)	Representative of project staff***, project 13***	Representative of the interest group***
My tolerance of uncertainty has improved (3.57)	Representative of project staff***, project 13***	Representative of the instruction group***, Representative of the interest group***
My comprehensive leadership know-how for projects, business and situations has developed (3.55)	Representative of project staff***	
I understand the importance of the management of the entity of business (3.51)	Ended, the last period EU programme***	project 3***, project 5***
My business know-how skills have developed (3.17)	Representative of project staff***	
My skills for governing a business plan have developed (3.16)		Representative of the interest group***, 3***
I can interpret a profit and loss account and balance (3,13)	Respondent's age 55-***, project 25***	

Note: The median for each statement is in brackets. A 5-point scale is used as follows: 1 = fully disagree; 2 = partly disagree; 3 = cannot say; 4 = partly agree; 5 = fully agree. Separate projects are in italics. See Appendix 1 for the names of the projects.

Source: author

The “representatives of project staff”, female respondents and those from the “HOPE (n=13)” and “YPEDA (n=23)” projects usually agreed significantly more than average with these propositions. The “representatives of the instruction group”, “representatives of an interest group” and male respondents and those from the project “the measurement tool of entrepreneurship education”, disagreed significantly more than average.

Table 4. Propositions related to the development of entrepreneurship pedagogy know-how and extremely significant deviations in respect to background variables and projects

Propositions for the development of entrepreneurship pedagogy know-how (medians)	Agrees significantly more	Disagrees significantly more
I let the students use their initiative (4.01)	Female respondent *** Representative of the target group ***	Large provincial and local projects*** Male respondent*** Representative of the instruction group*** Representative of an interest group***
I allow myself and my students to fail (3.94)	Representative of the target group ***	Representative of the instruction group*** Representative of an interest group***
I trust the students to act responsibly (3.87)	Representative of the target group ***	Representative of the instruction group***
My teaching and instruction supports the development of the social networks of learners/students (3.83)	Representative of the target group ***	Male respondent*** Representative of the instruction group*** Representative of an interest group***
New learning environments supporting EE have been tested and taken into active use (3.83)	Representative of project staff ***	Male respondent*** Representative of the instruction group*** Representative of an interest group***
I have adopted new methods in my teaching (3.79)	Female respondent *** Representative of project staff*** Representative of the target group ***	Male respondent*** Representative of the instruction group***
I use methods that develop the attentiveness to perceive and create possibilities in my teaching (3.77)	Female respondent *** Representative of project staff Representative of the target group ***	Male respondent*** Representative of the instruction group*** Representative of the instruction group***
I have learned to survive uncertainty (3.66)	Female respondent *** Representative of project staff	Male respondent*** Representative of the instruction group***
My teaching material supports entrepreneurial behaviour (3.66)	Representative of project staff***, project 23 ***	Representative of the instruction group***
My risk management and evaluation skills have improved (3.58)	Female respondent *** Representative of project staff	Male respondent*** Representative of the instruction group***
My teaching material has been renewed (3.52)	Projects of the previous EU programme phase *** Female respondent *** Representative of project staff	Male respondent ***

Note: The median for each statement is in brackets. The 5-point scale is used as follows: 1 = fully disagree; 2 = partly disagree; 3 = cannot say; 4 = partly agree; 5 = fully agree. See Appendix 1 for the names of the projects.

Source: the author

With regard to entrepreneurship pedagogy know-how, the high medians indicate that the results of the projects have been quite successful when considering the BAS framework or in relation to the BAS framework. In general, representatives of project staff and of the target group, as well as female respondents agreed significantly more than average with these propositions. The representatives of the instruction group, representatives and of an

interest group as well as male respondents, in turn, disagreed significantly more than average.

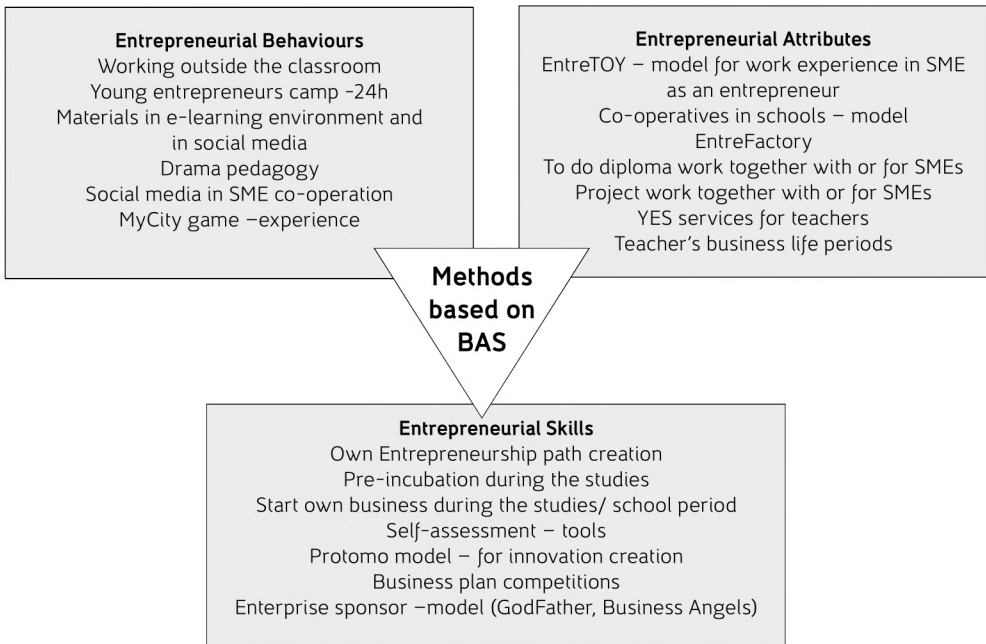
Table 4 illustrates how the respondents of the webropol survey experienced that the BAS framework came through in the project activities. One can notice that female interviewees in particular significantly agreed that the claims were true. On the other hand, male respondents did not perceive the effects as having been realized or coming to fruition in several sections. A significant difference can be perceived in the claim “I let the students use their initiative”. Many respondents did not feel this claim was realized, especially when referring to large projects. We can explain these differences by considering the different points of view held by project interest group/stakeholders and/or project staff and how they see the effectiveness of the projects.

It is possible to conclude from Table 4, that the BAS framework is being realized and, one might say, that it performed well among the evaluated EE projects. Respondents brought up: allowed students to use their own initiative, allowed themselves and students to fail, trusted student responsibility, social networks are developed, new environments have been adopted, new EE methods have been adopted, have learned to survive uncertainty, teaching materials support entrepreneurial behaviour and have been renewed, and risk and management skills have improved. It is important to note that respondents especially highlighted that if they allowed their students to use their own initiative, and the students allowed themselves to fail, they learned from mistakes and trust. We could also say that the EE projects have had a positive effect on the target groups, and the behaviour, attributes and skills of the teachers and students.

4.4. New Learning Methods

New entrepreneurial learning methods and best practices used during the EE projects at the national level could be identified. It could be said from the point of view of the interviewees, that the main idea of the new entrepreneurial learning methods tested in the projects was to carry out entrepreneurial teaching tasks in a new and encouraging way. The summary of the practices about recommended pedagogical methods was based on the data from the survey's open questions, the interviews and the workshops on entrepreneurial pedagogy. It can be said that the tested methods and best practices are the same as the entrepreneurial learning methods that have been recommended in the EE literature presented earlier in this paper in the section describing the framework for the study (e.g. Arpiainen, 2019; Diensberg, 2008; Fayolle, 2007; Fayolle & Gailly, 2008; Fayolle & Klandt, 2006; Gibb, 1993, 2005ab, 2006; Gustafsson-Pesonen & Kiuru, 2012; Klapper & Farber, 2016; Kyrö, 2005; Kyrö et al., 2008; Srivastava & Thomas, 2017).

Figure 3. The recommended methods for entrepreneurial pedagogy, compiled by the author



It is possible to compile the recommended methods under behaviours, attributes and skills. When unpacking the details based on the content of the BAS framework, it is preferable to list the recommended methods and understand if these can be used to make EE more effective. It is possible and logical to see that methods that are active and student-centred – more doing and less listening/sitting in the classroom – are closer to the BAS framework. Therefore, the use of the BAS framework in action could encourage the target group to do and act more entrepreneurially when working as employees or starting their own business.

4.5. Recommendations for Further Development of Entrepreneurship Education for all School Levels

Based on the qualitative data and the workshops new practices in EE can be used in practice at all schools levels. A significant proportion of the respondents believed that EE is being included in the school curricula, and new pedagogical models are part of the school’s culture. The situation also seemed to be very good for networking activities between practitioners. The majority of the respondents believed that cooperation has strengthened, and that it will continue. To some extent, according to the respondents of the study, there might be some need to develop EE in some regions. The situation has developed; however, effort is still needed to include EE at all school levels and in every region. The respondents also recommended that there should be some basic funding for developing EE at every school level and in every region.

The summary of the qualitative data and the outcomes of the workshops, which should be added to curricula, indicated developing entrepreneurial skills, team working, internal entrepreneurship skills, cooperative knowledge in educational institutions, willingness to

take risks and developing business competence. The importance of developing teaching environments so that they more resemble entrepreneurial environments should be emphasized when striving towards self-direction and discipline and cross-border entrepreneurship learning.

The interviewees and workshop participants recommended that, with respect to teacher training, the basic ideology should include practical orientation, entrepreneurship and business cooperation, a positive attitude towards entrepreneurship and creating a positive atmosphere for EE. Concrete ideas which could be implemented for developing teacher education included the idea that teaching methods should emphasize learning by doing and problem-solving ability, EE should be a compulsory part of teacher education, the learner's own strengths should be the focus, courage and creativity should be encouraged and failures should not be punished. It was also recommended by the respondents that there should be entrepreneurs participated in the teacher training and teachers should have an entrepreneur mentor to support them. Entrepreneurial learning environments in teacher education were mentioned to be very important. Career cooperation should be intensified, and training should be included in working life cycles. Entrepreneurship should be seen as an interdisciplinary theme and entrepreneurial pedagogy should be included in all subjects in teacher education (Figure 4).

Structures and resourcing of EE should be highlighted in future plans for rollouts of EE. Entrepreneurship should be increased in curricular and pedagogical reforms. For example, the EE path, cooperative enterprises and other training companies should become a part of studies. In addition, teachers highlighted plans to apply for an EE programme in order to address and eliminate skill shortages (Figure 4).

Figure 4. Ideas for developing teacher training and new EE projects, compiled by the author

Ideas for developing teacher training	Ideas for developing new EE projects
<ul style="list-style-type: none"> - EE based on BAS should be a compulsory part of teacher training - Business/SME/entrepreneur co-operation should be included in training - Practical information about real business should be included - Entrepreneurial behaviours, attributes and skills should be presented - Testing entrepreneurial methods/pedagogy should be included 	<ul style="list-style-type: none"> - Business/SME co-operation during EE projects - Student engagement for developing business/SMEs - Commitment from top management to develop EE in schools - Develop entrepreneurial platforms / environments in schools - Encourage students to take more responsibility for their learning and future - Apply EE across all subjects - Develop EE materials for teaching/learning - Increase co-operation between teachers - Increase e-learning development

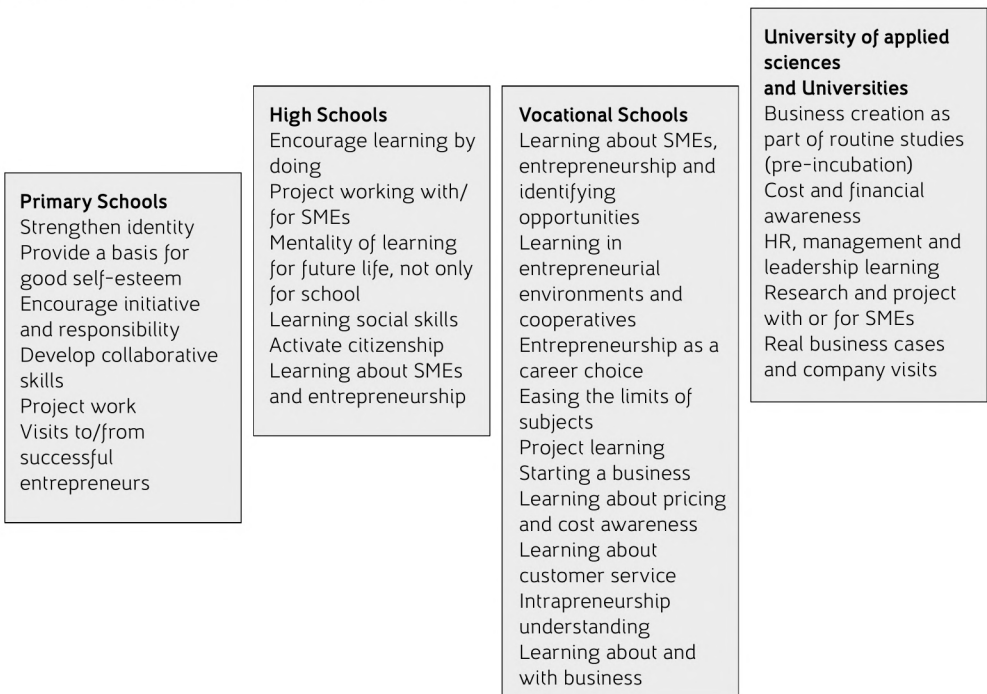
As can be seen, the ideas for the development of teacher training include more cooperating with SMEs and testing methods than only listening and learning in schools. The same ideas could be applied to developing EE projects. Other recommendations that could be highlighted were the commitment of top managers and developing the learning environment. These are necessary for EE development in schools because without commitment from the top level or without activating environments, it could be difficult to do things in an entrepreneurial way.

According to the interview respondents and the workshop material, some recommendations could be implemented to promote entrepreneurship at different school levels. It is possible to connect these ideas to the BAS framework (e.g. recognising and seizing opportunities, solving problems creatively, taking responsibility, networking, self-confidence and self-belief, learning by doing, persuading). The board members, as well as project actors, teachers and entrepreneurs supported the idea that entrepreneurship could be part of all levels of education from early childhood education to university. In early childhood, EE based on BAS can be seen as teaching self-direction, acting in a group, and stimulating ideas. It should highlight why we have to work, and why parents are busy at work. The balanced growth of children as individuals and their increased ability to act in groups should be seen as an investment. Business games and visits to companies, as well as small-scale rewards for new and good ideas were mentioned as possible methods of achieving these goals.

EE based on BAS in primary schools could encourage entrepreneurship by having students start up their own business (Figure 5). Lower grades could stick to identifying the pupils' own strengths, achieving and strengthening a good sense of self-creation, taking responsibility for one's own initiatives, project work, and the methodologies of visiting representatives of business and entrepreneurship. Higher levels could focus on learning how to create their own business opportunities.

In high schools and vocational training EE based on the BAS framework could aim to set up a company while studying. Business creation and innovating new ideas should be an integral part of education. In the applied sciences and in universities, entrepreneurship could clearly be part of the studies, and teaching as well as ongoing research projects should serve the needs of working life. Necessary methods include real business cases and corporate and enterprise visits. See Figure 5, which presents tips for developing EE at all school levels.

Figure 5. Path and tips for developing EE at all school levels, compiled by the author



When thinking about the important aspects of the BAS framework which are to see opportunity, make things happen, problem solving, autonomy, working responsibly, deeper understanding, networking, creativity, activating, testing, modelling, student centring, risk-taking, selling, marketing and others, it could be underlined that the tips for developing EE in all school levels could come true if we let it happen. The base for that is created but it needs a support for that things could happen.

5. Discussion and Conclusions for Future Systematic Entrepreneurship Education Evaluation Studies

Based on the results of this study it is possible to say that the situation for developing and utilizing EE in Finnish projects and schools is at a rather good level of development. The evaluated EE projects helped the participants to fulfil the goals based on the BAS framework, which is important for a deeper understanding of EE development in all schools. But EE development work has not been systematically evaluated or disseminated very much prior to this study, in which EE projects from 2000–2010 were collected and systematically evaluated.

This study used Gibb's EE framework including entrepreneurial behaviours, attributes and skills (BAS) as part of a systematic EE evaluation for developing an EE path for all school levels. Like many other research projects before and since this study (e.g. Arpiainen, 2019; Diensberg, 2008; Fayolle, 2007; Fayolle & Klandt, 2006; Gustafsson-Pesonen & Kiuru, 2012; Kajanto et al., 2001; Rae & Carswell, 2001; Seikkula-Leino et al., 2010), it is a delight to see and understand that the BAS framework really works as the basis for systematic EE evaluation and a path for EE development.

However, the evaluation also showed that some of the earlier problems of EE development still exist (e.g. Arpiainen, 2019; Diensberg, 2008; Fayolle, 2007; Fayolle & Gailly, 2008; Fayolle & Klandt, 2006; Gibb, 1993, 2005ab, 2006; Gustafsson-Pesonen & Kiuru, 2012; Klapper & Farber, 2016; Kyrö, 2005; Kyrö, Speer & Braun, 2008). For example, teaching staff could not access sufficient resources (money, time or flexibility) for the development of EE (inflexible structure in schools, lack of entrepreneurial know-how). Furthermore, cooperation between teachers of subjects is difficult because staff attitudes vary and curricula are often inflexible. As teaching staff are used to working alone, it is difficult to learn to teach together, meaning collaboration, information sharing and learning from each other is difficult (the attitudes of other staff, lack of entrepreneurial know-how). The interviewees and workshop participants also reported that cooperation between different teachers of subjects does not work (inflexible curricula).

Entrepreneurship is often seen as part of business studies and often only recommended and intended for people who want to start up their own business (lack of entrepreneurial know-how). The interviewees and participants in this study also raised the idea that the payroll system for teachers does not support entrepreneurial learning. There are still people among the teaching staff who consider EE too complicated and time consuming. The reality is that the situation would be just the opposite. When the target group was asked to talk about life after the project, it could be observed that the project's aims are quite alive. An extremely important point in the study was detecting whether the projects helped the target groups develop entrepreneurial readiness and skills, and if new entrepreneurial learning methods tested during the period of the projects were successful. Fortunately, in both cases

the answer was clearly yes. It could be confirmed that entrepreneurial learning and entrepreneurial pedagogy, described at the beginning of the paper, really work when one wants to support entrepreneurial thinking and action in the school context.

Some commentary on the development of EE can be mentioned also considering EE as a strong broad-based and holistic concept and practical activity, which includes both areas of life management and self-direction, creativity and the courage to do things differently, not just for business start-ups but in functions across a whole spectrum of life. When EE is seen and implemented as a framework based on BAS, everyone can apply it in their own work, behaviour and activities, such as promoting entrepreneurship and developing entrepreneurial skills, teamwork, internal entrepreneurship skills, cooperative knowledge in educational institutions, willingness to take risks and developing business competence. The importance of developing teaching environments are mentioned and entrepreneurial environments should be emphasized when striving towards self-direction and self-discipline and cross-border entrepreneurial learning.

This study is valuable for teacher training in the sense that the basic ideology should involve practical orientation, cooperation between entrepreneurs and businesses, a positive attitude towards entrepreneurship and creating a positive atmosphere for EE. Concrete ideas which could be implemented to develop teacher education included: teaching methods that emphasize learning by doing and problem-solving ability, EE as a compulsory part of teacher education, focus on the learner's own strengths, promote courage and creativity and the freedom to fail without penalty. It was also recommended by respondents that entrepreneurs should participate in teacher training and teachers should have an entrepreneur mentor to support them. Entrepreneurial learning environments in teacher education were mentioned as very important. Career cooperation should be intensified and training should be included in working life cycles. Entrepreneurship should be seen as an interdisciplinary theme and entrepreneurial pedagogy should be included in all subjects in teacher education.

It can be said that based on this study the recommended methods and best practices in support of EE based on BAS are the same as the entrepreneurial learning methods that have been recommended in the EE literature (e.g. Arpiainen, 2019; Diensberg, 2008; Fayolle, 2007; Fayolle & Klandt, 2006; Gibb, 1993, 2005, 2006; Gustafsson-Pesonon & Kiuru, 2012; Klapper & Farber, 2016; Kyrö, 2005; Kyrö, Speer & Braun, 2008; Srivastava & Thomas, 2017).

It is possible to compile the recommended methods under a framework of behaviours, attributes and skills (BAS). When unpacking the details of BAS, it is preferable to list the recommended methods and understand whether these can be used to make EE more effective. It is possible and extremely understandable to see that methods that are activating and student-centred – doing less listening/sitting in the classroom – are closer to the BAS framework.

It might be possible based on this study to recommend that EE based on the BAS framework can be part of all levels of education from early childhood education to university. In early childhood, EE can be seen as teaching self-direction, acting in a group, and stimulating ideas. It should highlight why we have to work, and why our parents are busy at work. The balanced growth of children as individuals and their increased ability to act in groups should be seen as an investment. Business games and visits to companies, as well as small-scale rewards for new and good ideas were mentioned as possible methods for achieving these goals. In primary schools, EE could encourage entrepreneurship by having students start up their own business. The lower grades could focus on identifying the

students' strengths, encouraging and strengthening a good sense of self-creation, taking responsibility for one's own initiatives, project work, and learning from the methods of visiting business representatives and entrepreneurs. Higher levels could focus on learning how to create their own business opportunities. In high schools and vocational training, EE could focus on setting up a company while studying. Business creation and the innovation of new ideas should be an integral part of education. In the applied sciences and universities, entrepreneurship could clearly be part of the curriculum, and teaching as well as ongoing research projects should serve the needs of working life. The necessary methods include real business cases and corporate and entrepreneur visits.

This study has shown that the practical work of EE based on the BAS framework in schools seems to be time consuming. Work started in the middle of the 1990s and still needs to continue. The development of EE has become an important part of school development. For example, EE has been strongly implemented in curricula and teaching involves the students to help develop entrepreneurial characteristics. EE has given meaning and goals, and it will change practices. EE terms, coverage, definitions, methodologies and practices seem to be rather familiar, but still these require further work. This work will continue and it will need the development of study materials, a deeper understanding of EE based on the BAS framework, teacher training and networking and knowledge of best practices from different actors and cooperation throughout the different levels of education.

In summary, the development of EE is progressing and the work will continue in cooperation with the excellent EE expert network. Co-development should include public actors, financiers, industry, schools, entrepreneurs, businesses as well as students, so that user voices can be taken into account. Previously, the experiences and know-how of real entrepreneurs and students have been neglected in the development of EE.

Among the limitations of this study is the fact that some of the EE projects evaluated here had ended quite a long time before commencing the study. It was quite difficult for the respondents to remember what changes had really happened, what kinds of methods were tested and so on. It was also quite difficult to get the right people to participate in the study because many of the project staff, students or teachers were no longer working at the same place.

Future EE evaluation studies should start during the project's lifecycle and should continue for a while after the project has ended. The study should continue for a rather long time as a follow-up study after the project has ended. The top management of the organization (school directors) must also be included in the evaluation.

During this study, the functionality of the BAS framework has been tested through EE evaluations. The results of the study show that the BAS framework works for evaluating EE rather well and the methodology built up for the systematic evaluation of EE projects in this research can also be used for the evaluation of EE projects in other countries. Taking the BAS framework of entrepreneurial behaviours, attributes and skills into account is an important part of entrepreneurial actions both in developing EE in schools and developing EE in projects.

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Appendix 1. Detailed information about the sample of EE projects for the study

The number and name of the Project	The Original fundamental set	The email address did not function	Away	The final fundamental set	Answers	
					N	%
1. KummiWiki (GodparentWiki)	6			6	5	83,3
2. Kartta kouraan ja matka yrittäjyyteen (Map to hand and trip to the entrepreneurship)	16	1		15	12	80
3. Yrittäjyyskasvatuksen mittaristo (Measurement tool of EE)	47		1	46	33	71,7
4. Yrittäjyyskasvatuksen ehjä polku (Unbroken path of EE)	24	2	2	20	14	70
5. Yrittävän elämisen malli (the Model of entrepreneurial life)	12			12	8	66,7
6. Y-love: Yrittäjyyslukioverkosto, Jyväskylän seudun yrittäjyyslukio ja Y4-yrittäjyyslukio (EE-love)	3			3	2	66,7
7. Ykä Yritteliäs (Ykä Yritteliäs)	50	4	2	44	25	56,8
8. Työssäoppijasta yrittäjäksi BUSINESS-TOP (From "on-the-job learning" becoming an entrepreneur)	13	2		11	6	54,5
9. Lupa yrittää (License to be an entrepreneur)	15	2		13	7	53,8
10. SaTaVa (SaTaVa)	31	1	2	28	14	50
11. Innovaatio- ja yrittäjyyskeskus Innova (Innovation and entrepreneurship center Innova)	18			18	9	50
12. YRTTI-KESKUS Hyvinvointialojen yrittäjyyden kehittämishanke (Development of welfare EE)	12	6		6	3	50
13. HOPE – yrittäjyyskasvatushanke (HOPE – The EE project)	98	1	1	96	45	46,9
14. FIRMA – yrittäjyyteen valmentaminen toisella asteella (FIRMA – coaching for EE on vocational school)	68	5	1	62	28	45,2
15. Kasvu yrittäjyyteen (Growth to entrepreneurship)	148	10	6	132	58	43,9
16. Yrittämällä eteenpäin (Forward with enterprises)	65	1	3	61	26	42,6
17. Nuori yrittäjyys (NY): Yrittäjyyskasvatuksen polku ja Nuori yrittäjyys nousuun (Young Entrepreneurship)	43		2	41	17	41,5
18. YRITÄ (Try)	8	2	1	5	2	40
19. Innoakatemia (InnoAcademy)	9	1		8	3	37,5
20. YVI – yrittäjyyskasvatuksen virtuaalinen oppimisympäristö (YVI virtual learning environment)	19			19	7	36,8

21. LYYTI – löydä oma yrittäjyytesi, Pohjois-Karjalan hanke (LYYTI – Find your own Entrepreneurship)	20	1		19	7	36,8
22. YES yrittäjyyskasvatuskeskus (YES network)	165	4	5	156	55	35,3
23. Yrittäjyyskoulutuksen uudet opetusmenetelmät – YPEDA (The new methods for EE – YPEDA)	27	3	1	23	8	34,8
24. Kädet 007 (Hands 007)	69	2		67	23	34,3
25. Ammattiosaajasta yrittäjäksi (From professional to entrepreneur)	61	2		59	20	33,9
26. Ideasta liiketoiminnaksi – aloittavan yritystoiminnan tukeminen: Wäläkky (From idea to business – Wäläkky)	11		1	10	3	30
27. Strategialähtöinen liiketoimintaosaamisen kehittäminen (Strategy Based Business Development)	25			25	7	28
28. Yrittäjyyden portaat (The steps for Entrepreneurship)	5			5	1	20
29. Kulttuuriyrittäjyys, osaamisen edistäminen Keski-Pohjanmaalla (Cultural entrepreneurship development)	6	1		5	1	20
30. Oppilaitosten yrittäjyyskoulutuksen kehittämishanke –YTY (Development of EE in schools)	280	133	2	145	22	15,2
TOTAL	1374	184	30	1160	471	40,6

Appendix 2. The webropol questionnaire

Background questions

- The location of EE project (regional/national), The timeframe of EE project (ended, going on), The size (€) of the project, The respondent's role in the project, Age, Gender

Evaluation of the EE project success

- How important were next objectives on the EE project and How well the objectives were came true
 - Entrepreneurial pedagogy developing
 - Developing of the learning environment to direct operation responsibly and entrepreneurial
 - Strengthening of creativity and innovativeness
 - Affirmative entrepreneurship culture and attitude on national and regional level
 - Developing of participating and active citizenship
 - New business creation
 - Developing SME's business
 - Supporting the change ownership
- Did the EE project educations, actions support the deeper understanding of entrepreneurship come true

The entrepreneurship is the ability of the individual to change the ideas into operation. It contains the creativity, innovation ability and risk-taking, as well as, the operation of the ability to design and to lead to reach objectives. These properties support the everyday life of the individual in the education, as leisure and in other social operations. These properties are needed in entrepreneurship but they also increase the worker's consciousness of their work and help to take the possibilities. (eg. Kyrö, Klapper, Gibb, Fayolle, Gaille)

Yes/No/No answer

Have you met in your organization/institution any kinds of obstacles to use/test the EE come true

Yes/No/No answer

If yes, whats kind of

- What kind of good EE practices, methods you have learned from your EE project
Explain
- Have you tested good EE practices, methods in your work
What kind of you have tested
- What was in the project especially good
- What was in the project especially a failure
- What has from the project stayed in the operation after the project
Entrepreneurship education is part of our curricula
EE network is stronger
EE network continues
New entrepreneurial pedagogy are part of our school operations
EE is a part of schools and developing agencies strategy and actions
Regional EE is effective

Skills and know-how advanced in the EE projects

- Does next skills and know-how developed in the EE project
My new EE experimental learning and new EE operations has developed
I'm inspired to take an experience
Marketing and sales skills are part of any work
Networking skills are better
I have got tools for creative problem solutions
My skills of the making of proposals has developed
My tolerance of the uncertainty has improved
My wide management know-how has developed
I understand the wide business development importance
My business know-how has developed
Business plan coaching skills are better
I understand the profit and loss account and the balance sheet
- Do you think have your entrepreneurial pedagogy developed
I let my students to do thinks spontaneously
I allow failures (both my own and students)
I let my students to test new models creativity
I trust that my students are responsible
My teaching / coaching support students social networks developing

New entrepreneurial learning environments have been tested and are in use

I use new EE methods

I use EE methods, which develop to perceive and to create the vigilance opportunities

I have learned to survive uncertainty

My teaching materials support entrepreneurial behaviour

The ability to take risks has improved

My teaching materials have developed

Developing teacher training and teacher continuing education

- What kind of EE training should be for teachers
- Open ideas, methods, curricula

Appendix 3. The thematic interviews: Interviewed projects

The Number and name of the projects

1. KummiWiki (GodparentWiki)
2. Kartta kouraan ja matka yrittäjyyteen (Map to hand and trip to the entrepreneurship),
3. Yrittäjyyskasvatuksen mittaristo (Measurement tool of EE),
4. Yrittäjyyskasvatuksen ehjä polku (Unbroken path of EE),
5. Yrittävän elämisen malli (the Model of entrepreneurial life),
7. Ykä Yritteliäs (Ykä Yritteliäs),
8. Työssäoppijasta yrittäjäksi BUSINESS-TOP (From “on-the-job learning” becoming an entrepreneur),
9. Lupa yrittää (License to be an entrepreneur),
10. SaTaVa (SaTaVa),
11. Innovaatio- ja yrittäjyyskeskus Innova (Innovation and entrepreneurship center Innova),
13. HOPE – yrittäjyyskasvatushanke (HOPE – The EE project),
14. FIRMA – yrittäjyyteen valmentaminen toisella asteella (FIRMA – coaching for EE on vocational school),
16. Yrittämällä eteenpäin (Forward with enterprises),
20. YVI – yrittäjyyskasvatuksen virtuaalinen oppimisympäristö (YVI virtual learning environment),
21. LYYTI – löydä oma yrittäjyytesi, Pohjois-Karjalan hanke (LYYTI – Find your own Entrepreneurship),
22. YES yrittäjyyskasvatuskeskus (YES network),
23. Yrittäjyyskoulutuksen uudet opetusmenetelmät – YPEDA (The new methods for EE – YPEDA),
24. Kädet 007 (Hands 007),
25. Ammattiosaajasta yrittäjäksi (From professional to entrepreneur),
27. Strategialähtöinen liiketoimintaosaamisen kehittäminen (Strategy Based Business Development),
30. Oppilaitosten yrittäjyyskoulutuksen kehittämishanke –YTY (Development of EE in schools).

Appendix 4. The list of organizations that participated in the workshops

Universities:

- University of Turku
- University of Lappeenranta
- Aalto University
- University of Oulu
- Helsinki University

Universities of Applied Sciences:

- Satakunta University of Applied Sciences
- Haaga-Helia University of Applied Sciences
- Tampere University of Applied Sciences

Vocational Education institutes or high schools:

- Omnia Vocational Education Institute
- Salo Vocational Education Institute
- Länsi-Pirkanmaa Vocational Education Institute
- Jyväskylä Vocational Education Institute
- Business College Helsinki (vocational education)
- Valkeala High School

Primary schools:

- Mikkeli comprehensive school

Teacher education institute:

- Educode (The teacher continuing education organization)

Networks, projects or associations:

- The National YES network (association)
- HOPE –project
- Helsinki entrepreneurs (association)
- TAT – Taloudellinen tiedotustoimisto
- Finnish National Agency of Education
- The Federation of Finnish Enterprises
- Diges (association)
- Perheyritysten liitto (The Finnish Family Enterprises Union)

The Roles and Activities of Human Resource Managers: Empirical Results from Estonia based on Ulrich's Human Resource Model

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Abstract

The contribution that human resource management (HRM) functions and human resource (HR) manager roles make in supporting business operations and organizational performance has received wide attention. Less attention has been paid to HR roles and activities, and to the determinants that shape the performance of HR professionals within the organization. The aim of this study is to identify the HR activities and HR manager roles in Estonian organizations based on the Ulrich HR model and analyze the determinants influencing the HRM practices in organizations in strategic and operational terms, and the people and process-oriented dimensions. The results of the study reveal that the role of HR managers and their activities depends on the size of the organization, the people who are responsible for HR activities and the attitudes of top managers towards HRM. The results provide theoretical implications for the context-bound understanding of HR managerial roles and activities and offers practical guidelines for developing effective HR strategies and practices within the organization.

1. Introduction

Over the past several years, the role of human resource (HR) managers as a key asset in today's organizations has been under intensive discussion (Theriou & Chatzoglou, 2014). There is growing agreement that organizational human resource management (HRM) practices contribute substantially to the organization's financial performance (Jiang et al., 2012), influence employee commitment (Lamba & Choudhary, 2013), innovation performance (Kianto, Sáenz, & Aramburu, 2017) and other HRM performance measures, which then lead to organizational effectiveness (Bell, Lee & Yeung, 2006; Chand, 2010; Vivares-Vergara, Sarache-Castro & Naranjo-Valencia, 2016). Human resources (HR) is also gaining importance, in particular in strategic issues and as an essential source of competitive advantage for each organization (Nasurdin, Ahmad, & Ling, 2015). The study by Hamid (2014) demonstrated the positive influence of strategic HRM practices on the company's performance (Hamid & Souai, 2014). Becker and Gerhart (1996) found that investment in human resource management (HRM) practices influences business performance in a positive way (Chuang, Jackson & Jiang, 2016). Recognizing that HRM systems have a direct impact on a number of outputs (Boyd et al., 2012), it has been claimed that studies of the key impact of management approaches rarely take into account the complexity of organizations, and a more nuanced approach is needed (Chuang, Jackson & Jiang, 2016). In addition, less attention has been paid to HR managers' roles, responsibilities and activities, and the determinants of the performance of HR professionals within the organization.

The role of HRM is changing (Bhatt, 2011; Kowalski & Loretto, 2017; Tummers et al., 2015). Today, HR managers attempt to develop employees and to build structures in order to support business operations as well as to enhance the culture within the organization (Kusumastuti, 2011). Although empirical knowledge has been collected regarding positive relationships between an HR manager's strategic role and diverse outcomes, much less is known about how the strategic role of HR managers is shaped (Yang, Kim, & Kim, 2016). The report of the Estonian Labor Force Survey and the Forecasting System OSKA "A vision of the need for labor and skills" (Rosenblad et al., 2018) stated the growing need for strategic human resource management in organizations. The report claims a large number of companies (including public sector organizations) pay too little attention to the importance of human capital management (Rosenblad, Tilk & Sömer, 2018). The research literature discusses several approaches to HRM and how it is changing and developing. At the same time, relatively little is known about what HRM influences within the organization and how in order to advise team managers who implement the majority of the HR functions. In their study, Antila and Kakkonen (2008) found that the roles of HR managers in the case of international mergers and acquisitions is affected by top and line management support, external and internal factors, by the HR function itself and most of all by factors relating to HR managers themselves. Hence, there is a need for a deeper understanding of how this works in practice. Despite multiple attempts to explain HRM practices, there is limited empirical research to substantiate which determinants influence HRM and HR manager roles.

In the light of the above arguments, the aim of this study is to identify the HR activities and HR manager roles in Estonian organizations based on Ulrich's HR model and to analyze the determinants influencing the HRM practices and HR roles in organizations. Ulrich's HR model is used to explore HR manager roles and activities in Estonian organizations in

strategic and operational terms, and people and process-oriented dimensions. Many researchers have demonstrated that organizations that have changed their HRM have introduced some form of 'Ulrich's HR model' (Kusumastuti, 2011; Yusuf, Fidyawan, & Wekke, 2017) to guide how they focus on the people within the organization, including employees, managers, board members, and others. In particular, Ulrich defined four roles for HR managers. These are strategic partner, head of change, administrative expert and employee champion (Conner & Ulrich, 1996; Kusumastuti, 2011). The current study contributes to the theory by providing an understanding of the mechanism between HRM activities and HR roles as well as proposing a possible approach to improving the HRM system through developing HR strategies and practices in organizations. As the main contribution, this study provides a conceptual clarification of HRM in Estonian organizations, implementing Ulrich's HR model and showing the potential effect of different determinants on the roles of HR managers, and their activities and responsibilities. From a practical perspective, our research can offer guidance for organizational leaders to determine the desired role of their HR managers according to internal and external contexts. This practical implication is useful, as these roles should be fulfilled in order to maximize the effectiveness of HR strategies and practices within the organization.

The article proceeds as follows: First, we introduce the concept of HRM based on Ulrich's HR model. The second section outlines the methods used in the research. The last sections present an analytical overview of current HRM roles and practices in Estonian organizations, the discussion and a general conclusion.

2. Literature review

2.1. The Goals of Human Resource Management

The main goal of HRM is to maximize the productivity of companies by optimizing the efficiency and effectiveness of their personnel (Armstrong & Taylor, 2014; Tepp, 2012). There are different functions in HRM, including recruitment, performance evaluation, employee training, rewarding and motivation, and creating secure job placement (Azadeh & Zarrin, 2016). Ehnert et al. (2015) have defined sustainable HRM as the adoption of HRM strategies and practices that enable financial, social and ecological goals to be achieved, with an impact inside and outside the organization and over a long-term period while controlling for unintended consequences and negative feedback.

HRM is also gaining importance, in particular in strategic issues and as an essential source of competitive advantage for the organization (Ahmad & Salman, 2019). Recognizing that HRM systems have a direct impact on a number of outputs, studies of the key impacts of management approaches nevertheless rarely take into account the complexity of organizations (Boyd et al., 2012), hence, a more nuanced approach is needed (Chuang et al., 2016).

HRM refers to organizational activities that are directed to managing a set of human resources and ensuring that those resources are used to achieve organizational goals (Tiwari & Saxena, 2012). The roles of HR managers include administrative activities such as personnel administration and payroll management and more strategic activities like the management of employee training and career development (Cleveland, Byrne & Cavanagh, 2015). In the HRM literature, many management researchers have stated that in the future, HRM will need to be

proactive and responsive to the organizational and economic environments within which it is embedded (Boudreau & Ziskin, 2011; Cleveland et al., 2015).

2.2. Dave Ulrich’s Human Resource Role Model

In terms of a theoretical foundation, the current study is based on Dave Ulrich’s HR role model (1996) and explores HR manager’s roles in organizations in strategic and operational terms, and the people and process-oriented dimensions (Figure 1).

Figure 1. Dave Ulrich’s HR role model



Source: Compiled by author based on Ulrich, 1996

According to Conner and Ulrich (1996), the HR manager is responsible for identifying ways of doing business through the four managerial roles. The HR manager in the role of a *strategic partner* helps managers identify the components they need in order to implement the strategy that would require change (Conner and Ulrich, 1996; Vestberg, 2008; Saidi et al., 2014). The second role of the HR manager is as *head of change*, fulfilled by supporting organizational progress and ability to change. Endless change seems to be the modern routine in an organization and HR managers can support better adaptation to the changing conditions. Successful organizational changes always involve changes in human management practices (Ibid.). The HR manager’s role as *an administrative expert* emphasizes the need to influence managers by taking advantage of professional skills (Ibid). The HR manager is also the leader of the staff. This means that he or she acts as an intermediary, bringing the concerns of the employees to the attention of the management, as well as their good ideas and thoughts. In addition, continuous work is needed to improve the professionalism of the personnel; the HR manager should also have a “staff voice” before the management. In the role of *an employee champion*, the HR manager provides training and development opportunities for employees (Conner & Ulrich, 1996; Saidi et al., 2014; Vestberg, 2008).

While Ulrich emphasizes the position of HR manager as a leader and strategic business partner within the organization, this opportunity was limited in the 1980s and is likely to continue to be limited in many organizations because of the lack of power afforded to HR managers. In their study of factors affecting the role of HR managers in international mergers and acquisitions, Antila and Kakkonen (2008) found that HR managers focus on

how to organize their work rather than the potential contribution of HR. It can be claimed that HR managers tend to focus on “operational excellence” (Ulrich et al., 2009, 26 cit Glaister, 2014) at the expense of external strategic issues (Becker et al., 2001 cit. Glaister, 2014). It is known that when companies are mainly focused on profit and turnover, HR managers cannot bring any noticeable added value and nor can they become an authority figure within the organization (Farndale, Scullion & Sparrow, 2010). It is essential to look at the roles of the HR manager as a leader from one angle and as having a very special relationship with the employees from the other; to support other managers within an organization in different processes while at the same time managing their own HR department (Vestberg, 2008). Björkman et al. (2014) suggest that there is a need to study HR practitioners and practices, focusing on the everyday activities that the HR professional engages in within the organization. Based on the above, the first research question is: *What are the roles, activities and responsibilities of HR managers in organizations?*

The study conducted by Karasek (2016) showed that in innovative enterprises the largest role played by the HR department was as employee champion, then administrative expert, change agent and strategic partner (Karasek, 2016). Previous HRM research conducted in Estonian organizations revealed that people responsible for HR perform the role of an administrative expert (Kaarelson & Alas, 2008; Kalda, 2001; Rosenblad et al., 2018). The current study explores which of the HR manager’s activities and responsibilities enact their roles and what roles HR managers in Estonian organizations perform.

2.3. Determinants of HRM Practices and HR Manager Roles and Activities

There are internal and external factors able to influence HRM. Pearce and Robinson (2002; Genc, 2014) talk about four external forces – economic, political, social and technological. Factors influencing business strategy include national culture and traditions, industry/sector characteristics and legislation/regulation (Genc, 2014). Today’s global economy brings numerous challenges: rapid changes, new technology, consumer trends as well as generational shifts reshaping demands and the business landscape (Bersin, 2015; Bhatt, 2011). Generational and technological changes are driving an evolution of workplace experience both in the physical space and in the tools and machines that will have a major impact on work and the workplace. New technologies in modern life may also increase the potential for harm because they allow people to reach new heights, pace of working life, repetition, and workloads that employees cannot handle alone. In addition, new technologies increase employee productivity and will likely create new types of jobs that are still difficult to predict (Hamidullah, 2018). This will also place new requirements and demands on HRM. In an era of strong competition, to be effective HRM can no longer remain the same, nor can it meet standard practices without change. To remain competitive, we need to regularly develop and implement new and proactive HRM practices. Future HRM will need to adopt an outside-inside approach where the external environment and stakeholders influence what HRM does inside the organization (Ulrich & Dulebohn, 2015).

A commonly shared opinion is that the attitude of top management towards HRM defines the role of the people responsible for HR-related issues in the organization. If top management sees HRM issues as important for the company and if they think that HRM can add value to the company, they are more likely to invite the HR manager to join the management team and through that demonstrate the importance of HRM in their organization. If top management

focuses on financial factors rather than HRM, it will cause the HR manager to remain in a non-strategic role (Antila & Kakkonen, 2008). However, there remains a lack of evidence in these areas (Antila & Kakkonen, 2008; Björkman et al., 2014), and therefore this study explores the top manager's attitudes towards HRM. The study second research question is: *What attitudes and perceptions do top managers hold towards HRM?*

Generally, start-ups and small companies have little or no HR staff. Until a company has 50 to 75 employees, it hardly needs a full-time HR professional; a line manager can usually handle the HR activities (Ulrich & Dulebohn, 2015). Since Estonia has a small population and due to its recent historical background, most Estonian companies are relatively small (Kaarelson & Alas, 2008). For that reason, there is often no HR manager and the tasks of personnel/HR management are shared between the managing director and heads of other functions. In companies with less than 50–60 employees, the tasks of the HR manager/specialist are delegated to a person in another position (Kaarelson & Alas, 2008). As companies grow, HR departments and staff also grow (Ulrich & Dulebohn, 2015). The role of line managers as HRM practitioners has attracted some albeit limited research attention (Brewster et al., 2016). The third study question asks *whether the size of an organization shapes HRM and who is responsible for HR-related issues in Estonian organizations?*

When a company operates a single business, it competes by gaining leverage and focus. The role of the HR manager in a single business is to support that focus through its 'people practices'. To respond to changing realities, HR professionals should focus their time, energy, and passion on creating value. Value is defined by the receiver rather than by the giver, so a focus on value means the HR manager must identify the recipient of HR services and prescribe what they receive from insightful HR work (Ulrich, 2007). It is common in the business world in the past decade to be focused on short-term financial results, and the value of a senior manager's contribution is usually only rated on the economic results from a single year. This forces behaviors with a short-term perspective and as a result, the work of HR managers is undervalued (Tepp, 2012). Some companies have fallen prey to the concept of 'clutter trap' (Ulrich, 2007). They create visions, missions, principles, strategies, goals, objectives, value statements, and other well-intended documents, but they are plagued with concept clutter and lack strategic clarity. Organizations with strategic clarity have a clear focus on what they are and what they want to accomplish. All HR development activities from training to coaching to job design should begin with strategy. Although strategy is not static but evolving, HR professionals can ensure that the activities they design and deliver institutionalize strategy (Ulrich, 2007).

Wang & Shyu (2008) found that the alignment between the business and the HRM strategy is a key factor of success for organizations. When the HRM strategy and the business strategy are aligned, the effectiveness of HR practices and organizational performance were better than "those not aligned" according to the contingency perspective. Research involving CEOs and senior managers has tended to focus on perceptions of the importance of HRM and the purportedly low status of HR managers, whereas research involving middle and junior line managers has sought to explore the relationship between line management and HRM, the devolution of HRM responsibilities, and the effects of these on employee outcomes (Björkman et al., 2014).

3. Methodology

3.1. Study Design

In this exploratory study, the aim is to identify HR activities and HR manager roles in Estonian organizations based on Ulrich's HR model and to analyze the determinants influencing HRM practices and HR roles in organizations. The study attempts to analyze what shapes HRM practices in strategic and operational terms, as well as in regard to people and processes-oriented dimensions. Based on the theory, three research questions were raised:

1. What are the roles, activities and responsibilities of HR managers in organizations?
2. What attitudes and perceptions do top managers hold towards HRM?
3. Does the size of the organization shape HRM and who is responsible for HR-related issues in Estonian organizations?

Based on HRM functions and practices we created a list of HR activities.

Using a questionnaire and semi-structured interviews, we identified the activities people responsible for HR-related issues engage in. These activities were divided into four HRM roles based on Ulrich's HR model, which has also been used in previous HRM research in Estonia (Kalda 2001; Vestberg, 2008; Laurson, 2009). In line with these studies, we also use Ulrich's HR model as a tool to identify the activities HR managers engage in and the HR roles in Estonian organizations, and analyze what determines HRM practices, roles and activities in organizations.

3.2. Sample and Data Collection

The study is focused specifically on the perceptions of people responsible for HR-related issues, exploring their attitudes, values, roles, everyday activities and practices in order to explore how their work is organized and how senior managers value it. Data were collected using a questionnaire and semi-structured interviews with HR staff. The questionnaire included questions on the activities and responsibilities of people responsible for HR-related issues.

The activities and practices of HR managers were evaluated using a questionnaire with 59 items administered to (n=213) people responsible for HR-related issues in their organizations and studying the business administration curriculum at the Estonian Entrepreneurship University of Applied Sciences. The study surveyed a simple random sample of HR practitioners, line managers and employees from public and private sector organizations. Respondents were found by asking the following question: Who is responsible for HR management in your organization? Data were collected in February 2017 by means of an electronic questionnaire based on Ulrich's HR model (1996). The importance of the survey was highlighted, guaranteeing the anonymous treatment of the information given.

The aim of the questionnaire was to determine who fulfils HR-related activities in the organization and their HR-related responsibilities. We wanted to know how the roles are enacted, questioning the prevailing divide between strategic and operational roles. The questionnaire included questions about HR activities and responsibilities, and how people responsible for HR-related issues are involved in the decision-making process. The division of the responsibilities and activities of HR managers was based on Ulrich's HR model and

according to the following roles of the HR manager: strategic partner, change agent, administrative expert, and employee champion. Respondents to the survey were asked to select from the list which HR activities they performed.

The survey sample includes 59 respondents. The distribution of respondents according to the size of their organization shows that 33.9% of respondents are representatives of large enterprises with more than 250 employees. They are followed by 33.5% of respondents who work in firms with 51 – 250 staff, and 22% who are representatives of organizations with 11 – 50 employees; 6.8% of respondents work in micro enterprises with up to 10 employees, and the same number of respondents failed to answer. The majority of the respondents (69.5%) are employed in the private sector. The number of respondents from the management level was 36.0% – 7 respondents were representatives of top management and 14 of middle management. In terms of positions, 49.2% of the respondents were specialists.

In order to support the assessment of factors influencing HR activities, practices and roles in different organizations, six semi-structured face-to-face interviews with six people responsible for HR-related issues in their organizations were conducted. The sample was formed from organizations with the best practices based on the list of “Estonian Trade-Industry Competitive Level 2018”. A simple random sample was selected from those organizations based on the following criteria: place in the competitive organization list, different sizes and operational fields. The qualitative research addressed the following questions: how are HR activities, goals and practices are realized practically within an organization; how do HR personnel view their position and roles regarding skilled, competent and committed employees (i.e. “employee champion” in Ulrich’s HR model); how they deliver efficient HR practices (i.e. “administrative experts”); their capacity for change in terms of individual behavior, communication and organizational culture (i.e. “change agents”) and how they deliver business results (i.e. “strategic partners”) in the organization. The interviews were conducted in the Estonian language. Each interview with people responsible for HR-related issues lasted for an average of one hour and was recorded. All interviews were fully transcribed and analyzed. The interviews include the following information on the HR managers:

- Background information about the interviewee
- HR manager’s activities and responsibilities
- What issues top managers are concerned about when contacting the HR manager?

Content analysis was applied to analyze the interviews based on Ulrich’s HR model. The author of the article read the transcribed material repeatedly and highlighted the activities that various personnel managers perform.

4. Results

The data reveal key issues in the roles and activities of HR managers in Estonian organizations. The results will be presented as follows: first, the main results from the questionnaire covering the activities of employees responsible for HR-related issues and how these activities relate to different HR roles and the size of the organization. Second, the main findings are presented from the interviews with employees responsible for HR-related issues working in organizations with the best HRM practices. Only in approximately 20% of cases did the respondents mention that the owners or their assistants (secretary, assistant, administrator or office manager; or managing director or owner; or accountant) are responsible for HR

matters (Table 1). The majority of the respondents answered that in their enterprises, personnel specialists and human resource managers are responsible for HRM.

Table 1. Responses to the question “Who is responsible for human resource management in your organization?”

	The number of responses	% of responses
Director of Human Resources or Head of Personnel Division (HR Architect, HR Designer, HRM Partner)	19	32.2
Personnel or staff specialist	15	25.4
HRM activities are divided between people working in different positions	14	23.7
Secretary, Assistant, Administrator or Office Manager	5	8.5
Managing Director or Owner	6	10.2

Source: Author’s calculations

Question 2 in the questionnaire contained HR activities and responsibilities in the organization. HR activities were classified based on Ulrich’s HR role model. The rest of the answers were divided (as a percentage of 59 respondents), as shown in Table 2. Resulting from the survey, the most widely spread responsibilities of HR employees were as follows: recruitment and selection of employees (86.4% of respondents); personnel management and personnel administration (84.7% of respondents); compilation of personnel documents (83.1%), and industrial relations (employment contracts, labour law) (81.4% of respondents). A low percent of respondents stated that the people responsible for HR-related issues deal with talent management in their organization. Only in 32.2% of organizations do HR people deal with that topic. Low response rates were also found regarding such responsibilities as preparing the business plan (25.4%) and identifying how to do business (16.9%). All the activities which were rated low are part of the HR role “strategic partner”.

Table 2. Activities of people responsible for HR-related issues and their connection with Ulrich's HR model

Activities and responsibilities	No. of responses	% of responses	Ulrich's HR role, the activity is connected with
Recruitment and selection	51	86.4	head of change
Recruitment and selection	51	86.4	head of change
Personnel management and personnel administration	50	84.7	field expert
Compiling personnel documents	49	83.1	field expert
Industrial Relations (employment contracts, labor law)	48	81.4	field expert
On-boarding	41	69.5	head of change
Identifying training needs and organizing training	37	62.7	employee champion
Workforce planning and budgeting	35	59.3	head of change
Designing the working environment (relationships within the organization, psychological work environment)	33	55.9	strategic partner
Remuneration and motivation	32	54.2	head of change
Organizational culture design	31	52.5	strategic partner
Organization and accounting for working time	30	50.8	field expert
Organizing joint events	30	50.8	employee champion
Communicating the organization's strategic goals to employees	27	45.8	employee champion
Internal communication	27	45.8	employee champion
Helping managers identify the components needed to implement a strategy that would require change	26	44.1	head of change
Health promotion (health behaviors, pro-healthy lifestyles)	26	44.1	employee champion
Working Environment (physical work environment, rooms and tools)	24	40.7	employee champion
Providing and developing IT solutions for HRM	21	35.6	field expert
Talent and succession management	19	32.2	strategic partner
Preparation of business plan	15	25.4	strategic partner
Identifying ways to do business	10	16.9	strategic partner

Source: Author's calculations

Based on the results, we can see links between the activities to be performed and the position of employees responsible for HR-related issues (Table 3). The findings indicate that people responsible for HR-related issues act in all four roles but the activities most mentioned by employees responsible for HR issues are "personnel management and personnel administration", "compiling personnel documents" and "industrial relations (employment contracts, labor law)" which are the activities of an expert in this field. The majority of the respondents answered that the employees responsible for HR-related issues primarily deal with "recruitment and selection" (86.4% or 51 respondents). In detail this means that 30.5% of all those 86.4% are from organizations where the role of HR is fulfilled by the "HR Director or HR Manager (HR Architect, HR Designer, HRM Partner);" 20.3% were from the organizations where the role of HR manager is fulfilled by people working in different positions ("personnel work and management are divided between people working in different positions") and the same share were from enterprises where HR activities are the responsibility of a "personnel or staff specialist". The study also revealed that in organizations where HR

activities were fulfilled by a “*personnel or staff specialist*”, only 40% of respondents said that they are responsible for the development of organizational culture. The response ratio was higher in organizations where HRM activities were fulfilled by a “*director of human resources or head of human resources*” (14 respondents out of 19). A high response rate was also found in organizations where the “*managing director or owner*” deals with HRM activities – 4 out of 6 respondents gave positive answers.

Table 3. Links between the activities to be performed and the position of people responsible for HR-relates issues, % of responses

HR activities	Director of Human Resources or Head of Human Resources	Personnel work and management are divided between people working in different positions	Personnel or staff specialist	Secretary, Assistant, Administrator or Office Manager	Managing Director or Owner
Identifying ways to do business	1.7	6.8	3.4	0.0	5.1
Helping managers identify the components needed to implement a strategy that would require change	20.3	11.9	6.8	1.7	3.4
Providing and developing IT solutions for HRM	15.3	8.5	8.5	0.0	3.4
Identifying training needs and organizing training	25.4	10.2	16.9	5.1	5.1
Recruitment and selection	30.5	20.3	20.3	8.5	6.8
Communicating the organization's strategic goals to	15.3	8.5	13.6	1.7	6.8
Organizational culture design	23.7	8.5	10.2	3.4	6.8
On-boarding	22.0	16.9	18.6	6.8	5.1
Workforce planning and budgeting	20.3	11.9	16.9	3.4	6.8
Industrial Relations (employment contracts, labor law)	27.1	18.6	22.0	6.8	6.8
Organization and accounting of working time	13.6	15.3	15.3	5.1	1.7
Personnel management and personnel administration	27.1	22.0	23.7	6.8	5.1
Compilation of personnel documents	25.4	20.3	23.7	8.5	5.1
Preparing the business plan	6.8	1.7	8.5	1.7	6.8
Talent and succession management	11.9	6.8	10.2	0.0	3.4
Remuneration and motivation	20.3	11.9	13.6	3.4	5.1
Designing the working environment (relationships within the organization, psychological work environment)	15.3	15.3	15.3	3.4	6.8
Working Environment (physical work environment, rooms and tools)	11.9	10.2	6.8	5.1	6.8
Health promotion (health behaviors, pro-healthy lifestyles)	16.9	5.1	16.9	1.7	3.4
Internal communication	11.9	11.9	10.2	5.1%	6.8
Organizing joint events	16.9	13.6	11.9	6.8	1.7

Source: Author's compilation

The questions concerning internal communication activities provided interesting results. The highest response rates were in organizations where the HR activities are fulfilled by the “*managing director or owner*” (4 of 6 respondents) and by a “*secretary, assistant, administrator or office manager*” (3 of 5 respondents). Only 36.8% of the responses (7 of 19 answers) were from organizations where people responsible for HR-related issues were the “*director of human resources or head of human resources*” (Table 3).

Based on our results, there is a significant association between the type of people responsible for HR-related issues and the development of a healthy internal culture. There was greater response rate to question 2.19 in organizations where HR is handled by a “*personnel or staff specialist*” than from other groups. Therefore, if HR activities are the responsibility of a “*secretary, assistant, administrator or office manager*” the activities indicative of the HR role “strategic partner” occurred to a minor extent.

Based on Ulrich’s HR model, we can claim that “strategic partner” is main role of HR managers in the organizations where the “*director of human resources or head of human resources*” fulfils HR activities. We found that in organizations where HR activities were fulfilled by a “*personnel or staff specialist*”, only 40% of respondents said that their HR is responsible for the development of the organizational culture. The response rate was higher in organizations where HR activities were fulfilled by a “*director of human resources or head of human resources.*” A high response rate was also evident in organizations where the “*managing director or owner*” deals with HR activities. Based on Table 3, it can be stated that the majority of respondents answered that their HR employees deal with recruitment and selection (86.4%). This means that 30.5% of those (86.4%) are from organizations where HR activities are fulfilled by “*director of human resources or head of human resources.*” A similar share (20.3%) of answers were from organizations where HR activities are fulfilled by a “*personnel or staff specialist*” and from the organizations where “*personnel work and management are divided between people working in different positions.*”

To find out whether the HR activities depended on the size of the organization cross-tables and chi-square tests were used. A chi-square test of independence determines whether there is an association between variables (i.e. whether variables are independent or related). The organizations are divided to three categories on the basis of size as follows:

Category 1: < 51 employees

Category 2: 51 – 250 employees

Category 3: > 250 employees

The results of the test where the variables are not independent of each other and where there is a statistical relationship between the variables are presented below (Table 4-6).

Based on the results, there is a significant association between size of organization and involvement in the development of IT solutions for HR ($\chi^2(2)=12.0$, $p=0.002$).

Table 4. Association between organization size and “involvement in the development of IT solutions for HR”, % of responses

		Providing and developing IT solutions for HRM management, % of responses		% of responses
		No	Yes	
Size of organization	< 51	27.2	1.7	28,8
	51 - 250	20.3	10.2	30.6
	> 250	16.9	23.7	40.6
Total		64.4	35.6	100

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.000 ^a	2	0.002
Likelihood Ratio	13.701	2	0.001
Linear-by-Linear Association	11.789	1	0.001
N of Valid Cases	59		

Notes: a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.05.
Source: Author’s calculations

The bigger the organization, the greater the involvement of HR in developing IT solutions for HR people in the organization. Since the p-value is lower than the chosen significance level ($\alpha = 0.05$), we can reject the null hypothesis and conclude that there is an association between the size of the organization and involvement in “creating a business plan (in staff-related sections)”. Based on the results, a significant association was found between the size of the organization and the involvement of HR people in developing the business plan ($\chi^2(2)=7.318, p=0.026$). Based on the results, a significant association was found between the size of the organization and the quality of work people responsible for HR-related issues provide on the topic of “identifying the components needed to implement the strategy” ($\chi^2(2)=7.318, p=0.026$).

Table 5. Dependence of the size of the organization and HR activity “Preparing the business plan”, % of responses

		Preparing the business plan, % of responses		% of responses
		No	Yes	
Size of organization	< 51	13.6	15.3	28.8
	51 - 250	18.6	11.7	30.5
	> 250	8.5	32.2	40.7
Total		40.7	59.3	100

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.318 ^a	2	0.026
Likelihood Ratio	7.600	2	0.022
Linear-by-Linear Association	3.468	1	0.063
N of Valid Cases	59		

Note: a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.92.
Source: Author’s calculations

Since the p-value is less than the chosen significance level ($\alpha = 0.05$), we can conclude that there is an association between the size of the organization and involvement in “preparing the business plan”. Based on the results, there is a significant association between size of organization and the involvement of HR in developing the business plan ($\chi^2(2)=7.318$, $p=0.026$).

Table 6. Dependence of the size of organization and HR activity “helping managers identify the components needed to implement a strategy that would require change”, % of responses

		Helping managers identify the components needed to implement a strategy that would require change. % of responses		% of responses
		No	Yes	
Size of organization	< 51	13.6	15.3	28.9
	51 - 250	25.4	5.1	30.5
	> 250	23.7	16.9	40.6
Total		62.7	37.3	100

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.251 ^a	2	0.072
Likelihood Ratio	5.606	2	0.061
Linear-by-Linear Association	.271	1	0.602
N of Valid Cases	59		

Notes: a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.34.
Source: Author’s calculations

Based on the results, there is a significant association between the size of the organization and the quality of the work HR provides on the topic of “helping managers identify the components needed to implement a strategy that would require change” ($\chi^2(2)=7.318$, $p=0.026$).

Based on the results of the survey, a strong relationship was found between the employee responsible for HR-related issues and the activities that should be fulfilled by HR. The study also found a correlation between the size of the organization and HR areas of responsibility. Content analysis was used to analyze the interviews (Table 7). Every effort was made to protect privacy, confidentiality, and the anonymity of the individuals and organizations participating in the study.

Table 7. Themes from each interview based the answers of the interviewees

The size of the organization and profile	People responsible for HR-related issues	Existence of an HRM strategy	HR activities fulfilled by people responsible for HR-related issues	HR role
HR 1 >250 Private sector	HR Director and five HR Partners assisted by Employment Relations Department, Career Center, HR Academy.	Yes, In written form.	Implementing the overall HRM strategy. Communicating the organization's strategic goals to employees Internal communication Helping managers identify the components needed to implement a strategy that would require change Talent and succession management Preparing the business plan Identifying ways to do business	strategic partner, head of change
HR 2 >250 Public sector	Personnel department assisted by division managers.	Yes. In written form.	Personnel placement, wage setting, training.	field expert, employee champion
HR 3 51 – 250 Public sector	Assistant to the board	Yes. In written form.	Personnel management and personnel administration Compiling personnel documents Industrial Relations (employment contracts, labor law)	field expert
HR 4 51 – 250 Private sector	HR Manager	Yes. In written form	Personnel management and personnel administration Compiling personnel documents Industrial Relations (employment contracts, labor law) Recruitment and selection Working Environment	field expert, head of change, employee champion
HB 1 < 51 Private sector	The Head of Business	No.	Recruitment and selection, remuneration and motivation, Health promotion (health behaviors, pro-healthy lifestyles)	head of change, employee champion,
HB 2 < 51 Private sector	Heads of department and Head of Business	Yes. In written form.	Identifying training needs and organizing training Designing the working environment (relationships within the organization, mental work environment) Remuneration and motivation Communicating the organization's strategic goals to employees Talent and succession management Preparing the business plan Identifying ways to do business	employee champion, head of change, strategic partner

Source: Author's calculations

Based on the interviews it seems that the people responsible for HR-related issues in an assistant position mainly engage in activities that are in the roles of an *expert* and *employee champion*. If HR activities are the responsibilities of the “*HR director or HR partner*” the person performs the roles “*strategic partner*” and “*head of change*”. An *HR Manager* in a medium-sized organization seems to engage in the roles *expert*, *head of change* and *employee*

champion. In small organizations, where the people responsible for HR-related issues were head of department or head of business, their activities engaged in the roles *employee champion*, *head of change* and *strategic partner*. The *head of business* in a small organization engaged in the roles “*employee champion*” and “*head of change*”.

The results from the study revealed that that in most of the organizations who have best practices, HRM focuses on people and values them. The interviewees mentioned that:

HB 1 ‘In the current labor market situation, it is very important to keep your employees. I do everything I can so they feel comfortable.’

HB 2 ‘If necessary, I personally support them if they have problems at work or at home.’

It can be pointed out that in small organizations where HR activities are the responsibility of the top managers, a personal approach is possible since it is easier to stay in contact with all the employees.

The data from the interviews revealed that the roles that are essential for employees responsible for HR include being a leader and key collaborator. This was reported by three interviewees, as follows:

HR 1 ‘HR partner is responsible for ensuring that all staff processes and strategies are implemented in the division he/she supports. He/she is the main partner for the division manager.’

HB 1 ‘His work is to create efficient work organization, to identify the needs of employees, and to shape the company’s face through the employees.’

HB 2 ‘I am dealing with the development of the employees. I plan employee training. I motivate them.’

The expectation of fulfilling the role of strategic human resource management (SHRM) was viewed in two different main categories – the existence of a personnel strategy and involvement in making strategic decisions. In the studied organizations, people responsible for HR-related issues seem to be involved at the strategic level. The answers to the question “what topics does the senior manager discuss with HR employees” were as follows:

HR 1 ‘Leaders are the key collaborators for the HR Director and HR partners who work closely with each other, and the HR partner is generally familiar with all the important issues.’

HR 2 ‘For example, if a senior manager has a project and goals where people are needed, he will contact the HR manager.’

HR 3 ‘As far as salaries are concerned, the manager asks me for advice. This is also the reason why we cannot talk about doing HR work because labor turnover is low and there is no classic model in this house.’

HR 4 ‘Oh, there are a lot of reasons and topics for discussion! But mostly with the desire to get advice or information about the problem.’

All interviewees mentioned the importance of the HRM strategy. Although in one small organization the strategy is not in written form, the leader values the existence of strategic goals and this is reflected in his activities.

HB 1 ‘There is no HRM strategy directly, but we follow the fact that the employee knows what to work for. There are certain standards and principles that an employee has to keep

in mind. For example, the employee and the organization (company) must contribute equally to the goals of the other party.”

One interviewee replied that they had a strategy in written form but because the organization is creative, the written principles are not important. In the investigated organizations, HR activities were related to the general management system. Most of the interviewees stated that in their organizations an HRM strategy exists in written form and it guides the HRM activities in the organization. Based on our results, it is possible to claim that the investigated organizations are aware of HRM. Managers attitudes shape what activities are priorities and this shapes the roles of the people responsible for HR-related issues. Using interviews, we identified common HR activities in Estonian organizations and the determinants that shape the roles of the HR managers. In addition, we wanted more information to support the data gathered by the questionnaire. Based on the results of the interviews, it can be said that if the people responsible for HR-related issues are in higher positions, their role was seen as a “strategic partner” and “head of change”. These findings support the fact that a relationship was found between the employee responsible for HR-related issues and the activities that should be fulfilled by HR people.

5. Discussion

The purpose of this paper was to identify the role and activities of people responsible for HR-related issues in Estonian organizations. We used Ulrich’s HR model to explore the roles and activities of HR managers in Estonian organizations in strategic and operational terms, and across people and processes-oriented dimensions.

To achieve the aim of the study, three research questions were addressed. *An answer to the first research question allows us to identify the roles, activities and responsibilities of HR managers in organizations.*

The findings indicate that people responsible for HR-related issues in Estonia perform all of the roles of Ulrich’s model. However, organizations where the HR manager is considered a strategic partner formed a smaller portion of the sample. In organizations where HR activities are the responsibility of the Head of Business, the activities of HR managers also involved strategic tasks. This result supports the idea of Antila and Kakkonen (2008) that a senior manager’s understanding of HRM determines whether HR people are involved at a strategic level. HR specialists tend to focus on traditional administrative tasks (Boglund et al., 2011; Meijerink, Bondarouk & Looise, 2013) and are excluded from decision-making (Parry and Tyson, 2007 cit Glaister, 2014). According to research by Kaarelson and Alas (2002), only 33% of Estonian HR managers were involved at the highest level of decision-making. The results of the current study revealed that HR still does not play a full role as a strategic partner. This was mainly seen in the way HR only provides critical input for strategy as required. These decisions then play a crucial role in the effective implementation of employee management practices in their organization (Sikora & Ferris, 2014). Ulrich does not assume that the HR manager will create a strategy for the organization – that is the duty of the senior executives. It is important, however, for HR people to be part of the management board (Ulrich, 1998). Khan suggests that having the necessary skills to be a business partner is strongly related to the role of HR managers in all activities to do with strategy (Khan, 2014).

In the role of *expert in the field*, it is critical to utilize professional skills in order to influence senior managers to stop regarding the HR manager purely as an administrator. Unavoidably, the remaining routine tasks include many challenges. It is necessary to find ways to perform various personnel tasks faster, more efficiently and/or more cost-effectively while retaining or improving levels of quality. Furthermore, in addition to saving resources, such an efficiency-oriented expert role will increase the importance of the HR manager, among other things functioning as a 'door-opener' and a strategic partner to the senior managers (Ulrich, 1998). Our survey revealed that offering new technical solutions to improve HRM is among the tasks of half of the HR staff, and same amount of respondents are involved in the decision-making process of that area.

Shaping the working environment (relationships in the organization, psychological work environment) is one of the activities of the role as *employee champion*. The findings indicate that shaping the working environment (relationships in the organization, psychological work environment) is one of the responsibilities of more than half of the HR people surveyed. The same amount of people responsible for HR-related issues are mostly responsible for managing work time. Promoting health, healthy behavior and healthy lifestyles are activities for HR people in the role of *personnel or staff specialist*. Our study revealed that activities for more than half of HR employees include shaping the psychological work environment. Information and communication relates to the role of HR managers being a *leader for the employees*.

The results of our study indicated that the most prevalent role of HR managers in the organizations we studied is the role of an *expert in the field*. The major tasks of HR people include preparing and completing personnel documents and managing personnel data and personnel accounts. While Ulrich underlines that such a role should not be dominated by a bureaucratic approach, in our study, the most frequent observation was that of performing activities pertaining to bureaucracy.

The second research question was about the attitudes and perceptions of top managers towards HRM. Based on the results of the interviews, we can say that in organizations where HR activities are the responsibility of the Head of Business, the activities of HR managers also involved strategic tasks. This result supports the idea of Antila and Kakkonen (2008) that a senior manager's understanding of HRM determines whether HR people are involved at the strategic level. Overall, however, it is suggested that HR people tend to play a strategic role in larger organizations.

This led us to the third research question which focuses on how the size of the organization and who is responsible for HR-related issues in the organizations influences HRM. The results of this study are in line with a previous study conducted by Tiwari and Saxena (2012) regarding HRM practices that are affected by external and internal factors, such as the size of the organization, the position of people responsible for HR-related activities and the operational field of the organization. Overall, however, it is suggested that HR people tend to play a strategic role in larger organizations. Poór et al. (2011, 2019) have also confirmed that the bigger the company, the stronger the position and strategic role of HR.

The findings of our survey confirmed that in small companies, HR activities are the responsibility of people from different positions. Usually, HR activities are the responsibility of *heads of department* and *head of business*. One previous study conducted by Boudreau and Lawler (2009) discovered the role of the HR manager as a strategic partner is essential within the organization. This study found that HR is a strategic position in larger

organizations and in cases where the people responsible for HR-related issues are the managing directors or heads of department.

Although the evidence is not clear cut, it does appear that the most common responsibilities of HR people in Estonian organizations are recruitment and selection, personnel management and personnel administration, compiling personnel documents and industrial relations (employment contracts, labor law). A surprisingly low percentage of respondents answered that people responsible for HR-related issues deal with talent management. The results demonstrate that HR activities and responsibilities vary depending on the organization size and the position of the people responsible for HR-related issues.

6. Conclusion

The contribution of human resource management (HRM) functions and the roles of human resource (HR) managers in supporting business operations and organizational performance has received wide attention. Less attention has been paid to HR roles and activities, and to the determinants shaping the performance of HR professionals within the organization. The purpose of this paper was to identify HR activities and the roles of HR managers in Estonian organizations based on Ulrich's HR model and to analyze the determinants influencing HRM practices and HR roles in organizations. We used Ulrich's HR model to explore the roles and activities of HR managers in Estonian organizations in strategic and operational terms, and the relevant people and process-oriented dimensions. The study surveyed a random sample of HR practitioners, line managers and employees from public and private sector organizations.

The findings indicate that people responsible for HR-related issues in Estonia perform all of the roles in Ulrich's HR model. However, organizations where the HR manager is considered a strategic partner formed a smaller portion of the sample. The results of the study reveal that the role of HR managers and their activities depend on the size of the organization and on the people responsible for HR activities. The author used Ulrich's HR model to suggest novel research approaches to shed new light on several open questions within the HRM field. Factors that affect the activities of HR managers were observed through four HR roles. In this study, we described HRM practices in Estonian organizations. Based on the results of the study, it can be argued that determinants shaping the roles and activities of HR managers are the size of the organization, the position of the people responsible for HR-related issues and the attitudes of the top management towards HRM. The main contribution of the study is in providing conceptual clarification of the roles and activities of HR managers and complements our understanding of what shapes HRM management.

The present study has limitations that also need to be addressed. First, there are methodological limitations. As it is known that HRM is specific and unique for each organization and sector, the results from the current study cannot be generalized to all Estonian organizations, and so a more heterogeneous sample and a case study approach are needed in the future. In addition, adopting a face-to-face interview methodology also introduces a potential interview bias. A small number of interviewees as well as a small number of questionnaire respondents means a small sample overall. Therefore, further research with a larger number of respondents, including senior managers, must be conducted.

Furthermore the quantitative data was self-reported, which may be affected by information bias and recall bias, especially in relation to reporting delicate issues.

This study was not designed for the results to be generalized to all organizations in Estonia. However, the results are likely to be applicable for many organizations that operate in Estonia. The article identified a common need to improve the understanding and the contribution of the role and practices of HRM in a selected sample of Estonian organizations, suggesting that while there may be some variation in terms of size and sector in the application of HRM roles and practices, there is a need for further development of the mechanism for linking HR strategy and business performance as an essential prerequisite for knowledge organizations. While we cannot take over the human resource management practices of other organizations, knowing the determinants and their impact on HRM is necessary when making choices based on the organization's needs. Furthermore, the methodological approach adopted in this study can also be used in studies in other countries.

As its main contribution, this study provides a conceptual clarification of human resource management (HRM) in Estonian organizations, complementing Ulrich's HR model and showing the potential effect of different determinants on HRM activities and responsibilities. Further investigation should be realized with more factors and with a larger sample. Furthermore, organizations in different countries should also be compared. We suggest that our article contributes to HRM literature in two ways. The results of the current study provide theoretical implications for the context-bound understanding of the roles and activities of HR managers, and offers practical guidelines for developing effective HR strategies and practices within the organization.

In future, it would be essential to replicate the current topic in a longitudinal study in order to track changes in HR roles and competencies. Future research into this issue will provide a deeper insight into exactly how the development of technology and other changes reshape and redefine HR roles and activities and professional competencies.

Further research should consider other essential aspects of HRM, such as the development of e-HRM and which factors affecting the effective implementation of HRM in the organization at different stages of HRM, such as operational, relational and transformational phases.

The current study made a scientific contribution to the literature in regard to roles and activities in HR within organizations, analyzing them according to Ulrich's HR model. Another clear theme to emerge from the results of the study is the devolution of HR tasks to (line) managers and other personnel in micro and small enterprises, who have a positive attitude, but maybe lack the required skills, knowledge and professional competencies in the field of HRM.

Based on the results of the study, the importance of the adoption of a more strategic role for HR people should be emphasized. The findings indicate that positive attitudes and strong leadership on the part of employers are key to ensuring that HRM can make a better contribution. The study may also offer a positive contribution to meet the immediate and future challenging context of the organization by introducing a more systematic approach and recommendations for the strategic role of HR through careful planning, positive attitudes, and support, training, and follow-up.

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