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# A Cross-Border Acceleration Program: The Case of Slovenia and Italy

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Startups and SMEs are considered to be key players in the economic development of nations. That means it is necessary to establish an ecosystem that will allow these firms to develop and grow. Our paper deals with the role of regional innovation ecosystems in the process of developing and nurturing these companies. In particular, we investigate the role of a cross-border collaboration in establishing a regional innovation ecosystem that goes beyond borders, and provide evidence of a successful cross-border collaboration between Italy and Slovenia. Based on primary and secondary data collection, an integrated model of a cross-border acceleration program was developed. Our findings have important implications for cross-border collaboration in the area of establishing cross-border accelerator programs, and represent an example of best practice in this filed. In the future consideration of support and encouragement of innovation ecosystems, cross-border collaboration should be seen fundamental for efficient technology and knowledge transfer from research institutions to companies.

*Key words:* entrepreneurship, innovation ecosystem, startup, accelerator, cross-border collaboration

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## Introduction

Successful startups and small and medium enterprises (SMEs) have the ability to create new jobs and contribute to the economic welfare. Especially startups are considered to be a key player in the economic development. In order to support the development and growth of startups and SMEs, a suitable ecosystem needs to be developed to provide external support and appropriate environmental conditions for their survival and growth (Ojaghi, Mohammadi, and

Yazdani, 2019, Tripathi et al. 2019b). Among the various actors and types of support, accelerator programs have been identified as an important part of the entrepreneurial ecosystem (Cohen et al. 2019).

The region's business ecosystem may determine the success of firm development. A worldwide example for a region that is best known for its successful startup creation is the Silicon Valley in North California (USA) (Tripathi et al. 2019b). It is acknowledged that the main reason for the success of the Silicon Valley is the spirit of cooperation. The relationships established among its network members facilitate the exchange of resources and enable innovative companies to grow and become highly profitable (Amadeo 2020).

Based on the awareness about the importance of proximity to suppliers, customers and technology to achieve a competitive advantage, the idea of developing a suitable innovation ecosystem in the Italian-Slovenian cross-border region was born. It was called the Cross-border Acceleration Bridge for entrepreneurs – CAB. The purpose of this program was to empower local resources, become a facilitator in the startup phase, support SMEs in the process of internationalization and encourage the exchange between industry and researchers. The main questions investigated during the project were related to the needs of companies in the Italian-Slovenian cross-border region, like what do new firms actually need to survive and grow and what do SMEs need in order to go international. Around these two key questions the integrated model of a cross-border acceleration program was jointly design by Italian and Slovenian partners.

The aim of the program was to provide a new cross-border service that will become a fundamental part of the innovation ecosystem of Alpe-Adria. By establishing relationships among research institutions, universities, companies and organizations for entrepreneurship support from three regions (Friuli Venezia Giulia (Italy), Veneto (Italy) and Slovenia), one of the main outputs would be a consolidated cross-border network that will provide innovative services to foster entrepreneurship in the cross-border area and also beyond it. In fact, past research has shown that language and legislative issues might be barriers for practical cross-border cooperation, but on the other hand differences in culture and technology may facilitate the cross-border knowledge transfer (Makkonen et al. 2018).

The main objectives of our study are to present the role and importance of innovation ecosystems and accelerators in the process of firm development and technology transfer from research centres to business, and to present the case study of the cross-border collaboration between Slovenia and Italy in co-establishing a cross-border

acceleration program. In order to achieve our goals, we developed two research questions:

1. How do accelerators contribute to the development and growth of startups and SMEs?
2. What are the key elements of a cross-border acceleration program based on the specific needs of Slovenian and Italian companies?

To answer these two questions, a structured literature review on startups and acceleration programs was conducted, an analysis of the Smart Specialization Strategy (S3) of Friuli Venezia Giulia, Veneto and Slovenia was performed to identify the best opportunity areas of cross-border collaboration between the two countries, and a comparative analysis of entrepreneurship support systems in the Italian-Slovenian cross-border region was conducted.

## Theoretical Background

The economic growth of a country heavily depends on the ability of its companies to develop innovative products and services (Fritsch and Noseleit 2013, Tripathi et al. 2019b). In developing innovative products, startups have a key role, since their primary cause of birth is their innovation capability (Ojaghi, Mohammadi, and Yazdani 2019). They have the ability to disrupt an existing market and scale themselves into unicorns (Tripathi et al. 2019a). Today, due to the increased openness in innovation and technology, the entry barriers for new startups are lower than in past (Ojaghi, Mohammadi, and Yazdani 2019).

Startups can be defined as temporary organizations in search for the right, repeatable and scalable business model or as organizations with the aim of creating new products under uncertain circumstances with limited experiences and inadequate resources. They cannot be treated just as smaller versions of big companies (Blank and Dorf 2012; Clarysse and Bruneel 2007; Ojaghi, Mohammadi, and Yazdani 2019, Ries 2011; Tripathi et al. 2019b). Startups are seen as major source of innovation, since they constantly seek for new technologies to develop new products and redesign new business models (Kohler 2016). They represent an effective mechanism for creating new jobs in developing countries (Humala 2015). Statistical data show that annually startups create an average of 3 million new jobs only in the United States.

Therefore, the policy makers responsible for the employment growth should definitely give a special emphasis to this type of com-

panies and develop measures that contribute to their development (Kane 2010).

Startups might be seen as the key drivers of innovativeness and growth in the nowadays society, but at the same time they are extremely vulnerable, and therefore require special external support. Startups are new-born companies that are exposed to numerous challenges, like for example the shortage of resources (Ojaghi, Mohammadi, and Yazdani 2019). They are foreigners on the market and therefore they lack reputation and market knowledge (Lichtenthaler and Ernst 2008). Research shows that most early-stage startups fail within two years from their establishment, mainly because they fail to achieve a good problem-solution fit and because they fail to learn during the process of customer and product development. Hence, in order to increase the survival rate of startups, a suitable innovation ecosystem that provides them with adequate support from product idea development until market entrance is needed (Tripathi et al. 2019a). The aim of every startup is to become a steady and independent company.

## INNOVATION ECOSYSTEM

Past research has confirmed that in order to foster the development of startups, an adequate ecosystem must be developed around these firms (Tripathi et al. 2019a). During the literature review on this topic, we came across different naming of ecosystems, like for example startup ecosystem, business ecosystem, innovation ecosystem and entrepreneurial/business ecosystem. The differences are mainly due to different points of view from which an ecosystem is considered. For example, the innovation ecosystem is focused on innovation, while the business ecosystem is usually focused on a product, customer or an industry (Ojaghi, Mohammadi, and Yazdani 2019). The innovation ecosystem is often understood as a synonymous with the business ecosystem, since both are focused on creating a collaborative network that aims at innovation by adopting a systematic approach (Fenga et al. 2019). Some authors believe that there should be a distinction between an entrepreneurial ecosystem and startup ecosystem, since promoting entrepreneurship and startups are two different things. Though, they are inter-reliant (Tripathi et al. 2019b).

Cohen (2006) describes the entrepreneurial ecosystem as a geographic region, in which interdependent actors mutually interact to create new ventures over time (like startups, but not only). These interdependent actors may have impact on the formation and growth

of the entire group as well as on the whole economy. Cukier, Kon, and Thomas (2016) defined a startup ecosystem also as limited region within 'one-hour travel' range that consists of people, their startups, and support organizations that aim at creating new startup companies and contribute to the evolvement of the already established ones.

The innovation ecosystem similarly as the startup ecosystem represents the infrastructure that enables the development of new companies and supports the existing ones. Since it is focused on a region, it also contributes to the creation of jobs in a particular region or country, employs local resources, and contributes to the growth of domestic products (Tripathi et al. 2019b). Further, it consists of a network of different stakeholders who are embedded in this ecosystem (e.g. entrepreneurs, universities, research centres, investors, funding institutions, local authorities, etc.). The network provides its members the access to resources, information and other type of support and encourages the establishment of new companies and their growth (Tripathi et al. 2019b). Startups have a fundamental part in the ecosystem since they represent the drivers of innovation, but on the other hand their survival and success mainly depend on the resources from other actors embedded in the ecosystem (Ojaghi, Mohammadi, and Yazdani, 2019). Therefore, both startups and existing companies can benefit from each other. Startups may benefit from large networks and diverse resources of the already established companies, while big companies can benefit from the innovative capabilities of nascent startups (Alberti and Pizzurno 2017).

Entrepreneurs, demography, finance, market, education, human capital, technology and support were recognized as the eight factors of a startup ecosystem. On the other hand, the key players in providing support in startup ecosystem are the government, legal framework, media, mentors, events, incubators, and also accelerators (Tripathi et al. 2019b). In the next section, the focus is on accelerators, since the main objective of the project CAB was to develop an accelerator program that will promote the development of innovative companies and technology transfer in the Italian-Slovenian cross-border region.

## ACCELERATORS

In the early stage of firm development, entrepreneurs need the support of incubators to transform product ideas into real business, but in later stages of firm development they need the advanced support of accelerators to make their companies grow and further de-

velop. In fact, intensive mentorship and further funding are necessary to accelerate the business (Tripathi et al. 2019b). Although both accelerators and incubators offer similar services like networking and business consultancy, there are substantial differences in their objectives. In contrast to incubators, the purpose of accelerators is not to provide long-term assistance in terms of physical and administrative services. They have a more active role with the focus on nurturing rather than just supporting. Besides, they are more profit-oriented than incubators. On the contrary, incubators hold a more passive role with the predominant focus on support. Further, accelerators often provide financial packages before the startups are even formed (Ojaghi, Mohammadi, and Yazdani 2019). In comparison to incubators, accelerators offer more services to early-stage businesses. Apart from coaching and educational services, accelerated companies get also access to the accelerator's alumni and their networks (Mansoori, Karlsson, and Lundqvist 2019).

The defining features of accelerators are fixed-term and cohort-based educational and mentorship programs for startups founders (Cohen et al. 2019). By joining an accelerator program, startup founders are exposed to various mentors like accomplished entrepreneurs, venture capitalists, business angels, corporate executives etc. At the end of the program, there is a public event organized ('Demo day'), during which all participating startups present (pitch) their business ideas to potential investors. Y Combinator is known as the first accelerator program in the world, established in 2005 in Silicon Valley. In 2016, there were already more than 2000 accelerator programs all over the world (Fehder and Hochberg 2017). The data show an increased interest in this type of startup support in recent years.

The main purpose of accelerator programs is to seed startup companies. They aim at supporting startup founders to develop their business ideas and make them investment-ready. Accelerators provide a supportive environment with numerous possibilities of peer learning, opportunity identification, networking and referrals (Mansoori, Karlsson, and Lundqvist 2019). They are often established by its founders and local governments with the aim to transform their local economies through the development of startup technological clusters in their regions. Accelerators do not affect only the accelerated companies, but they have also a great impact on the entire region (Fehder and Hochberg 2017). The latter finding is definitely in favour of the development of the cross-border acceleration program CAB and the multiplying effects that such a program could have on

the entire Italian-Slovenian cross-border region. In the next section, the methodology used to reach the research goals is presented.

## Research Methodology

In this paper, the case study methodology is applied. Case study is a form of qualitative research approach that facilitates exploration of a phenomenon within its context using a variety of data sources (Baxter and Jack 2008). This approach is largely used in social sciences, especially in practice-oriented fields, like for example management and education. In order to achieve a thorough understanding of the problem, both qualitative and quantitative approaches should be used in the case study (Biba Starman 2013). Therefore, the case study approach can be seen as a frame that incorporates various research methods. The latter enables the researcher to thoroughly understand multiple facets of the explored complexed phenomenon (Baxter and Jack 2008; Simmons 2009).

Whenever a case cannot be considered without its context, the case study approach should be chosen (Baxter and Jack 2008). The latter applies also in our case, where the context in which the cross-border accelerator was developed is fundamental and has key implications for the development of its program. The contextual conditions related to specific needs of startups and SMEs are relevant for understanding the elements that a cross-border accelerator should have to best address these needs. Qualitative case study methodology was also recognized as being very valuable for evaluating programs (Baxter and Jack 2008), which also confirms our decision of adopting the case study methodology to evaluate the development and implementation of the cross-border acceleration program CAB.

In this research, the case under analysis is the development of the cross-border acceleration program CAB. The current research was conducted within the project Interreg Italy – Slovenia (2014–2020) Cross-border acceleration bridge – CAB, and represents a key step in increasing the understanding of the role of accelerators in promoting entrepreneurship and innovation among startups and SMEs. With this research we shed light on the needs and specifics of local companies in the cross-border area of Italy and Slovenia. Therefore, it represents the basis for the successful pilot implementation of the CAB acceleration program.

In order to reach the aims of the study, various research methods were adopted. First, the analysis of recent literature on startups and accelerator programs was performed in order to identify key accelerator features, key success factors of business accelerators, key

performance indicators and other important elements related to our research problem. Second, a comparative analysis of the Smart Specialization Strategy (S3) of Veneto, Friuli Venezia Giulia and Slovenia was conducted. The latter was a key step in identifying areas with most potential for a cross-border cooperation. Third, based on the research results the business model of the cross-border acceleration program was designed (adapted from Osterwalder and Pigneuer 2010), and finally the integrated model of the cross-border business acceleration – CAB was developed. Below, a more detailed description of the research process is provided.

A structured literature review on startups and accelerators was conducted in order to obtain an in-depth understanding of startups, their characteristics, needs and the role of acceleration in their development. The structured literature review was conducted by using the qualitative data analysis software NVivo. There were three sources of data used in the structured literature review. The first source represented journal articles in Scopus and EBSCO database. The keyword search was performed within titles, abstracts and keywords of the articles and enabled us to find relevant articles and generate the data being sought ('accelerator' and 'startup', 'accelerator' and 'SME', 'business accelerator', 'business acceleration'). The second sources of data were internet search on the most important consultancy companies and their publications and research reports on the topic of business acceleration. The third source of data represented the specific research on national and international institutions (local and national governments, European Union, United nations), and their publications. When collecting data, time period from 2011 to 2017 was covered. From initial few hundred abstracts, 42 documents were later on in-depth analysed. By type, the analysed sources were formed by journal articles (60%), consulting reports (33%) and institutional reports (7%). Most sources were from 2017 (38%) and 2016 (29%). The analytical framework for the structured literature review included 312 nodes in 16 categories of analysis. The topics covered in the literature review were the following: accelerator features, accelerator business model, type of accelerator, selection process, key performance indicator, key success and risk factors and most promising industries for acceleration.

In order to better understand what type of support services are currently provided by support institutions to companies in the Italian-Slovenian cross-border region, a comparative analysis of cross-border startup supporting systems were performed. The latter was achieved by collecting primary data with a questionnaire that was

developed and distributed online among support institutions in the cross-border area. In total, 25 incubators and accelerators were included in the survey. The results of these researches were helpful for designing the key elements of the program of the cross-border acceleration program.

In addition, two multidisciplinary research workshops were performed in order to exchange knowledge and best practices among key stakeholders in the cross-border innovation ecosystem in the area of firm acceleration. The first workshop was conducted in Koper at the University of Primorska (Koper, 30. 5. 2018), while the second one in Trieste at the University of Trieste (Trieste, 29. 11. 2018). The participants of both workshops were the stakeholders of the cross-border innovation ecosystem (like academics, entrepreneurship support organizations, companies, research centres etc.). Besides exchanging best practices in the area of acceleration, the participants also brainstormed on what should be the value proposition of the new cross-border service for business acceleration.

In the next section, the main research results are presented.

## RESEARCH RESULTS

On the basis of the analysis of recent literature on startups and accelerator programs, the main features of accelerators were identified. The main mission of accelerators is to foster the entrepreneurial ecosystem and generate opportunities. They can be either industry focused (diversification/specialization) or geographic focused (regional/global). In terms of funding structure, accelerators can be private, public or both (hybrid). Further, they can be established for-profit or non-for-profit. Most often the acceleration program is from three to six months long, and run by a management team with extensive managerial skills and experiences. Usually, there are classes of startups joining the program rather than individual companies. The investment in startups can be of various types (equity, equity-free grant, convertible loan or no investment at all). The key features are summarized in table 1.

Among the *support services* that an accelerator's program package should include, the following services were identified in the existent literature (Bagnoli, Massaro, and Bravin 2019):

- Structured mentoring
- Training programs (local mentor and international support system)
- Knowledge sharing workshops

TABLE 1 The Key Features of Accelerators

| | |
|---|---|
| Mission | Foster the entrepreneurial ecosystem and opportunity generation |
| Specialism | Industry focus: diversification, specialization |
| | Geographic focus: regional (local/cross-border), global |
| Funding structure | Private |
| | Public |
| | Hybrid |
| Investments | Equity |
| | Equity-free grant |
| | Convertible loan |
| | Loan |
| | No investment |
| Management team | Manager profile and experience |
| Duration | Generally, from 3 to 6 months |
| Cohort | Cohorts or classes of startups rather than individual companies |
| Legal form | For profit |
| | Non profit |

- Networking opportunities
- Co-working space
- Interaction with management team
- Demo days (pitch in front of qualified investors)
- Funding opportunities
- Customer development initiatives
- Identification of partners
- Market intelligence
- Support in business model design

Based on the online survey conducted among the accelerators and incubators in the cross-border area of Italy and Slovenia, we found that most organizations included in the study are focused on specific sectors or groups of them. They most often focus on technology sector, followed by accelerators operating in the field of finance, health and biological sciences (Bagnoli et al. 2019). Based on the number of sources in the analysed literature that considered a specific industry as a promising industry for acceleration, we developed a list of *most promising industries* for acceleration:

- Technology, media and telecommunications (9 of 42 sources)
- Financial services (7 of 42 sources)

- Health and healthcare (7 of 42 sources)
- Consumer goods (4 of 42 sources)
- Education (4 of 42 sources)
- Agriculture and food production (3 of 42 sources)
- Entertainment (2 of 42 sources)
- E-business (2 of 42 sources)
- Cloud Services (2 of 42 sources)
- Biotechnology (2 of 42 sources)
- Drones (2 of 42 sources)
- Real estate (2 of 42 sources)
- Publishing (1 of 42 sources)
- Biological sciences (1 of 42 sources)
- Energy (1 of 42 sources)
- Water and hygiene (1 of 42 sources)
- Environment (1 of 42 sources)
- Business and productivity (1 of 42 sources)
- Marketing and advertising (1 of 42 sources)
- Creative industries (1 of 42 sources)

When taking into consideration also the results of the analysis of the Smart Specialization Strategy (S3) of Veneto, Friuli Venezia Giulia and Slovenia, the following most promising industries for cross-border acceleration were selected (Bagnoli et al. 2019):

- Healthcare/Life-science
- ICT
- Financial and business service
- Consumer good/Retail
- Agriculture & Food
- Education
- Energy
- Biotech
- Logistic & Distribution
- Media & Entertainment
- Hospitality/Travel/Tourism

The identification of synergies and complementary areas in the cross-border regions of Italy and Slovenia enables policy-makers of both countries to develop instruments and measures that best meet the needs of the cross-border innovation eco-system and its

stakeholders. The latter leads to an increased efficiency of all investments, a more efficient knowledge and technology transfer from research centres to industry and a higher competitiveness of the entire area. For these reasons, the Regional Smart Specialization Strategies (RIS3) in question represent an essential element in developing the cross-border accelerator CAB. A combination of characteristics of both Italian and Slovenian market is key for the development and promotion of innovativeness of startups and SMEs in the area. Slovenia with its specifics (like small size, diverse market needs etc.) can represent the perfect laboratory in the initial stages of firm development and product validation, while Italy with its 60 million population is an ideal environment for expansion and preparation for internationalization.

When developing the CAB acceleration program, therefore a special emphasis should be given to the above listed industries. The most promising industries should be thus included among the selection criteria during the selection process of firms that will participate in the acceleration program. The selection process of startups for acceleration usually includes several stages and is based on different *selection criteria.* Based on the structured literature review, we identified 13 selection criteria:

- Business idea (4 of 42 sources)
- Industry (2 of 42 sources)
- Job creation potential (2 of 42 sources)
- Technical knowledge (2 of 42 sources)
- Portfolio logic (1 of 42 sources)
- Level of innovation (1 of 42 sources)
- Potential for global growth (1 of 42 sources)
- Internal resources and motivation (1 of 42 sources)
- Leadership qualities of the founders (1 of 42 sources)
- Accelerator's ability to increase the value of start-ups in the program (1 of 42 sources)
- Developed prototypes (1 of 42 sources)
- Idea potential in solving real problems (1 of 42 sources)
- Already obtained funding (1 of 42 sources)

One of the biggest challenges facing accelerators is how to measure their effect. Since not all accelerators purse the same goal, it is difficult to determine what the *key performance indicators* are. The results of the structured literature review on the key performance indicators show that the three most cited key performance indicators

in the literature are: (1) Impact on the ecosystem (8 of 42 sources), (2) Survival rate of startups (7 of 42 sources) and (3) Subsequent investments (5 of 42 sources). The list of the most cited key performance indicators includes also the following indicators:

- Number of applications to join the program (4 of 42 sources)
- Funds obtained by the startups (4 of 42 sources)
- Partnerships created by startups (3 of 42 sources)
- Percentage of acquisitions (3 of 42 sources)
- Distribution of performance (3of 42 sources)
- Number of accelerated activities (3 of 42 sources)
- Number of exits executed (2 of 42 sources)
- Number of employees in the firms (2 of 42 sources)
- Acceptance rate (2 of 42 sources)
- Financial support obtained from startups (2 of 42 sources)
- Market capitalization of startups (2 of 42 sources)
- Profits of the accelerated startups (2 of 42 sources)
- Startups admitted in top accelerators (2 of 42 sources)
- Alumni satisfaction (2 of 42 sources)
- Class size (2 of 42 sources)
- Number of investors at Demo days (2 of 42 sources)
- Failure rate (2 of 42 sources)
- Sources of financing (2 of 42 sources)
- Rate of return on the investment – ROI (2 of 42 sources)
- Number of new created jobs (2 of 42 sources)
- Financial sustainability (2 of 42 sources)
- Success rate (2 of 42 sources)
- Reputation (2 of 42 sources)
- Years of experience (1 of 42 sources)
- International partners and mentors (1 of 42 sources)
- Innovation goals achieved (1 of 42 sources)
- Acquired knowledge (1 of 42 sources)

Accelerators face similar challenges when it comes to indicate the *key success factors,* since not all accelerators have the same goals. Therefore, it is particularly hard to define the metrics for success. In the existent literature, there are many success factors indicated for business accelerators. Based on the structured literature review,

we developed a list of specific elements that were most often considered as a key success factor for accelerators. The list includes the following factors:

- Mentorship (26 of 42 sources)
- Network of partners (20 of 42 sources)
- Events as networking opportunities (11 of 42 sources)
- Alumni network (9 of 42 sources)
- Brand (8 of 42 sources)
- Definition of clear long-term goals (7 of 42 sources)
- Quality of the program (7 of 42 sources)
- Startups financial support (7 of 42 sources)
- Accelerator team (6 of 42 sources)
- Dialogue (5 of 42 sources)
- Strong backing (5 of 42 sources)
- Links with sources of financing (5 of 42 sources)
- Strategic alignment (4 of 42 sources)
- Clear definition of the process and selection criteria (4 of 42 sources)
- Product expertise (4 of 42 sources)
- Business skills (4 of 42 sources)
- Quality of experts involved (4of 42 sources)
- Set transparent and aligned objectives (3 of 42 sources)
- Extracurricular programs (3 of 42 sources)
- Efficient organization (3 of 42 sources)
- Right startup portfolio size (3 of 42 sources)
- Definition of a clear value proposition (3 of 42 sources)
- Well-defined metrics for monitoring the success of startup (3 of 42 sources)
- Action orientation (3 of 42 sources)
- Urgency created by time-limited program (3 of 42 sources)
- Location (3 of 42 sources)
- Quality of applications (3 of 42 sources)
- Education offered (2 of 42 sources)
- Independent team of startup advocates (1 of 42 sources)
- Performance indicator (1 of 42 sources)
- Time limited support (1 of 42 sources)

TABLE 2 Key Success Factors of Business Accelerators

| | |
|---|---|
| Strategy | Definition of clear long-term objective |
| | Set transparent and aligned goals |
| | Strategic alignment |
| | Definition of a clear value proposition |
| Program | Quality of the program |
| | Extra-curricular program |
| | Startup financial support |
| | Action orientation |
| | Urgency created by time-limited program |
| Network | Network of partners |
| | Alumni network |
| | Events as network opportunities |
| | Links to sources of funding |
| Resources | Brand |
| | Location |
| Procedure | Effective organization design |
| | Clear definition of selection process and criteria |
| | Right startup portfolio size |
| | Definition of metrics to trach startup success |
| | Quality of applications |
| Team and capabilities | Accelerator team |
| | Mentorship |
| | Dialogue |
| | Strong backing |
| | Product and business expertise |
| | Quality of experts involved |

We have further clustered the above listed key success factors of business accelerators into six groups: (1) Strategy, (2) Program, (3) Network, (4) Resources, (5) Procedure, and (6) Team and capabilities. The latter is represented in table 2. Each group represents a key element of the accelerator's business model.

On the other hand, in the existent literature there is little discussion on the main *key risk factors* of business accelerators. We have identified the following ones: (1) Financial risk, (2) Risk of market saturation, (3) Risk of disconnection from the community of local investment, and (4) Risks related to emerging markets.

Based on the above presented research results, the business model of the CAB acceleration program was designed. The key elements of the business mode are presented in table 3.

TABLE 3 CAB Accelerator Business Model

| | |
|---|---|
| Customers | Startups |
| | SMEs |
| | Investors |
| Value proposition | Fast validation |
| Program | Structured mentoring |
| | Regular counselling |
| | Training program |
| | Business and product advice |
| | Networking |
| | Funding |
| | Shared open space |
| | Alumni services |
| Process | Technical assistance |
| | Mentoring |
| | Monitoring |
| | Education |
| | Financial assistance |
| | Communication |
| | Events |
| | Demo days |
| Society | Development of the ecosystem |
| | Regional development |
| | Regional collaboration |

*Continued on the next page*

Customers represent the heart of any business model (Osterwalder and Pigneuer 2010). In the case of the CAB acceleration program, startups, SMEs and investors are the main customer segments. The value proposition of the cross-border accelerator for its customer segments is the opportunity to validate their product and service ideas. Besides validation, the program of the cross-border accelerator will offer also the following services: structured mentoring, regular counselling, training program, business and product advice, networking, funding, shared open space and alumni service. The most important resources required to make the business model of CAB work are a skilled management team, substantial financial resources and the CAB brand. The main processes that will need to be regularly conducted in order to run the business model are technical assistance, monitoring, mentoring, education, financial assistance, communication, organization of different events and Demo days.

TABLE 3 *Continued from the previous page*

| | |
|---|---|
| Resources | Brand |
| | Management team |
| | Financial resources |
| Partners | Mentors |
| | Venture capitalists |
| | Angel investors |
| | Alumni network |
| Revenue stream | Shares |
| | Fees |
| | Rentals |
| | Events |
| | Sponsorship |
| Cost structure | Equity |
| | Salaries |
| | Rentals |

NOTES Adapted from Bagnoli, Massaro, and Bravin (2019).

The main strategic partners that will support the business model of CAB are mentors, venture capitalists, angel investors and the Alumni network. Through regional collaboration and development of the ecosystem also other stakeholders of the cross-border region ('society') will participate in the new cross-border acceleration service. CAB will generate revenues through shares, fees, rentals, events and sponsorship. Among the most important costs that will occur while running the CAB business model are salaries, rentals and equity.

### *Integrated Model of the Cross-Border Business Acceleration* CAB

The main result of this research is the integrated model of the cross-border accelerator program. This model will allow to test and implement the cross-border service of business acceleration for startups and SMEs. When developing the model of the cross-border accelerator, the differences between the needs and characteristics of startups and SMEs were also considered (Ojaghi, Mohammadi, and Yazdani 2019).

The model was developed by integrating the research findings from the structured literature review, the comparative analysis of support services in the Italian-Slovenian cross-border region and by considering the findings of two multidisciplinary research workshops, during which best practices among the cross-border innovation ecosystem stakeholders were exchanged. The final model of the cross-border accelerator program CAB is presented in table 4. It in-

TABLE 4 The Integrated Model of the Cross-Border Business Acceleration – CAB

| | | | |
|---|---|---|---|
| Mission | Foster the cross-border entrepreneurial ecosystem and opportunity generation for startups and SMEs in the program area | Resources | *Funding.* CAB Project Interreg Italia-Slovenia; Funding from private investors (business angels, venture capital funds . . .); Funding from corporations; Funding from local, national, and international institutions<br>*Network.* 8 project partners; 20 beneficiaries; 100 mentors (country mentors, lead mentors); 100 consultants |
| Identified needs | Startups and SMEs need more effective technological transfer from research institutions | Program | *Investing.* No equity<br>*Support.* Mentoring (accessing local mentors, establishing an international support team); Training programs; Office space; Workshops; CAB points; Network opportunities; Integration with management team; Funding opportunities; Customer development initiatives; Identification of partners; Review of business models/strategies; Pilot test and case studies; Market intelligence; Pitching opportunities; Epitches; Knowledge sharing workshops/webinars<br>*Post-program.* Alumni services; Follow-on funding |

*Continued on the next page*

cludes all the elements necessary to implement a cross-border accelerator with the aim to increase the efficiency of technology transfer from research to business and to promote the innovation ecosystem. The model has been already successfully implemented and tested on a group of 20 startups and SMEs.

### *Pilot Implementation of the Cross-Border Business Acceleration* CAB

Throughout the entire duration of the acceleration program (6 months), the cross-border accelerator CAB provided to its beneficiaries formal and informal learning. The latter was achieved through three CAB points (Friuli Innovazione, Cà Foscari University and ABC Accelerator) that were developed during the project. Through intensive mentorship and the organization of numerous workshops it substantially improved the knowledge and skills of the accelerated startups,

TABLE 4 *Continued from the previous page*

| | | | |
|---|---|---|---|
| Aims and purpose | Improvement of the program area's innovation capacity; Creation of an Italian & Slovenian network to test and implement in the long run a new cross-border service for business acceleration, able to promote investments in the R&D of innovative products/services and to transfer technologies from R&D centers to firms | Selection | *Criteria for startups.* Legal entity at the end in the program area; Business idea; Working prototype (product/service with global, innovative and technologically advanced potentiality, ready for market tests); Coachability (technical expertise, strong lead founder, innovativeness, idea solves a real problem, potential for job creation) *Criteria for* SMEs. (1) Eligibility: Legal or operational offices in the program area; At least 5 years; Number of employees more than 20 or turnover more than EUR 5 mio; (2) Quality: Business idea; Coachability (technical expertise, strong lead founder, innovativeness, idea solves a real problem, potential for job creation) |
| Specialism | (1) Geographic focus: cross-border; (2) No sector focus: diversification | Key performance indicators | No. of innovative services, products and tools transferred to firms; No. of research institutes participating in crossborder, transnational, interregional projects; No. of companies that cooperate with research institutes; No. of investors at CAB Demo days; No. of applications, percentage of ventures receiving next-stage funding; percentage of ventures acquired |

NOTES Adapted from Bagnoli et al. (2019).

SMEs and project partners as well. The topics discussed during these practical workshops included business model design, unique value proposition design, making business in different cultures, rapid prototyping and modern ICT in entrepreneurship (e.g. 3D printing, virtual reality). By adopting different approaches of diffusing knowledge and innovative practices among companies and project partners, an environment of mutual learning was established.

The model adopted within the CAB project enabled all project partners and other actors of the cross-border innovation ecosystem to collaborate together on the development and growth of companies with high potential in terms of added value. The ability of companies to conduct business in two languages, in two different cultures

and on two different markets will definitely represent a competitive advantage for all the involved companies. Besides the increased co-operation among the actors of the innovation ecosystem, also new opportunities for match-making between young entrepreneurs and potential investors within the Italian-Slovenian cross-border region will arise. The CAB program with its support of mentors gives to young, promising entrepreneurs the opportunity to transform their innovative business ideas into a real-life business, and become a fundamental part of the innovation cross-border ecosystem.

## Discussion and Conclusions

We must be aware that startups are not just smaller versions of big companies, therefore they face different challenges, which calls for an appropriate environment, in which these firms can survive and grow. The primary goal of startups is to survive and find the right problem-market fit for the new idea they are introducing on the market, which usually is not an issue for already established companies. The external support to startups must be provided by various actors that together form the innovation ecosystem that operates in a specific region. Among the most important actors of an ecosystem there are entrepreneurs, universities, research centres, financial institutions, investors and entrepreneurship support organizations.

In our opinion, encouraging cross-border collaboration brings many advantages to the region's innovation ecosystem. First, it empowers local resources and provides a stimulating environment, in which the transfer of knowledge between industry and researchers in the cross-border area is fostered and supported by appropriate services. Second, cross-border collaboration may lead to the development of a network that will provide both startups and SMEs with the access to market, new opportunities, infrastructure and knowledge. The latter will result in higher competitiveness of all sectors in the region. Startups and SMEs by co-existing in an ecosystem can both benefit from each other. Startups can fasten their commercialization process by making partnerships with already established companies, while SMEs can get access to the innovation capabilities.

In the Italian-Slovenian cross-border region there are three universities, namely University of Primorska (Koper, Slovenia), University of Trieste (Trieste, Italy) and Cà Foscari University of Venice (Venice, Italy), which by our opinion represents a significant competitive advantage for the regional innovation ecosystem and may support the development of CAB. First, universities through vast entrepreneurial education contribute to the development of entrepre-

neurship among youth. Second, they help to develop new knowledge that drives innovation. Our findings suggest that this model of cross-border acceleration can successfully be developed only where there is substantial support of organizations like universities, research centres and potential investors in the ecosystem.

CAB is currently similar to a startup. First, it is in its early stage of growth. Second, it has limited resources, since it is funded by an Interreg program. Hence, the most important thing is to find a sustainable business model and an appropriate accelerator program that will allow CAB to function also after the project and its funding will be completed. We are aware that there is still plenty room for further improvements that will be done after a careful follow-up and evaluation of the project activities.

The current study is limited to a case study, where the case under analysis was the cross-border collaboration between Italy and Slovenia in co-developing a cross-border accelerator program. For this reason, it cannot be representative. Given the diversity of every country, each cross-border collaboration depends on the specifics of the involved countries (like economic structure, most promising sectors, characteristics of the entrepreneurial ecosystem, firms' needs, smart specialization strategy etc.). In future research, a multiple case study approach involving diverse forms of cross-border cooperation might be used to shed new light on the research problem. However, we believe that by analysing the case of CAB, we could provide an insight in the many benefits that might arise from a cross-border collaboration (like more efficient employment of local resources, better access to market, new opportunities, infrastructure and knowledge, more efficient technology transfer from research to business and an overall increase in the innovation capabilities of firms). The ability of companies to conduct business in two languages, in two different cultures and on two different markets represents a key competitive advantage of companies and might bring them many opportunities for further internationalization.

Hence, by addressing the case study on the cross-border collaboration between Italy and Slovenia in co-developing an acceleration program, we aim to direct the attention of policy makers to the many benefits that such program might have for regional innovation ecosystems of EU member states. Based on our research, we argue that cross-border collaboration should be seen fundamental for efficient technology and knowledge transfer from research institutions to companies. Most important, the current case study underlines the importance of EU-funding in facilitating cross-border col-

laboration and innovation transfer between EU countries. We believe policy makers should undertake cross-border initiatives that will support the development of innovation ecosystems, through which the innovation capacity and productivity of regions will be increased in the long run. By identifying synergies and complementary areas in cross-border regions, policy-makers can develop instruments and measures that can better address the needs of the cross-border innovation ecosystem and its stakeholders.

The program CAB represents an example of good practice in this area, and should be taken as such when developing cooperation programs and other initiatives to exploit the untapped growth potential in border areas of EU member states. It is especially important to foster sustainable trust between neighbouring countries, in order to establish mature and integrated cooperation approaches and prevent brain drain from border areas to national centres.

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## Notes

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# Employment of Foreigners from Bosnia and Herzegovina and Serbia in Slovenia

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Due to the lack of specific professions in the Slovenian labour market, more and more Slovenian employers are employing foreigners from Bosnia and Herzegovina (BiH) and Serbia. Our research has found that employers when recruiting most often encounter a lack of adequate candidates in the market and complex administrative procedures for the employment of foreigners coming from BiH and Serbia. Because of the easier and faster integration of foreigners into the work environment, companies provide various types of assistance, but often face the unwillingness of foreigners to adapt to the new environment. In the framework of the verification of the hypotheses and the conclusion of the article, we give the companies proposals to facilitate the employment procedures of foreigners and their faster integration into the work and living environment.

*Key words:* labour market, foreign workers, employment practices, Bosnia and Herzegovina, Serbia, employee integration

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## Introduction

The lack of certain profiles has been present on the Slovenian labour market for a long time. Therefore, Slovenian companies are sometimes forced to seek outside their own borders. It is interesting to note that in Slovenia at the end of year 2018, there were about 33,000 more foreigners than in 2015 (Raičevič 2019). Free movement of goods, capital, services and persons applies for Slovenia, as a member of the European Union (EU). And free movement allows citizens of the Member States of the European Union and their family members to move freely – with a purpose to work, study, retire and live between Member States. As a result, many administrative obstacles have been reduced. While the Republic

of Slovenia has an established right to free movement of workers with all Member States, the Republic of Croatia remains the exception. Workers who are citizens of the Republic of Croatia need a work permit to work in our country. This is not necessary for other Member States and countries of the European Economic Area (Norway, Iceland, Liechtenstein) and the Swiss Confederation, since citizens and their immediate family members in our labour market are completely equivalent to Slovenian citizens (free to self-employment or to work without work permits) (see http://www.mddsz.gov.si/si/delovna_podrocja/trg_dela_in_zaposlovanje/delovne_migracije/prost_pretok).

The situation is different for foreigners coming from third countries. Their employment in our country is carried out in accordance with the provisions of the Employment, Self-Employment and Work of Foreigners Act, which came into force on September 1, 2015.

## Current Situation on the Slovenian Labour Market

The Employment Service of Slovenia (ZRSZ) regularly publishes forecasts of the Occupational Barometer, which forecast labour market deficits. The forecast includes jobs that are expected to balance supply and demand, and those that are expected to have fewer job vacancies than actual job seekers.

According to various surveys from 2018, including the Occupational Barometer of ZRSZ (Kušar 2018), a 'list' of occupations has been compiled, which for 2019 also predicted that demand will be much higher than actual supply or that there will be further severe lack of adequate candidates in the labour market. In these occupations we include: cleaners, simple workers, electrical and electromechanical engineers, electrical technicians, mechanical engineers, chemists, mechanics and repairers, carpenters, waiters, cooks, salesmen, machine operators, drivers, masons, tool makers, pharmacists, specialist doctors, etc.

According to the Occupational Barometer of ZRSZ, the excess of providers in the labour market is mainly reflected in the following professions: business secretary, journalist, economist, graphic designer, store manager, educator, official in finance and insurance, translator, etc. (Zavod Republike Slovenije za zaposlovanje 2018).

## Foreign Countries and Employment Areas in 2018

According to the data of the Health Insurance Institute, from December 31, 2018, there were 74,028 foreigners employed in Slovenia. Most of them are from the republics of the former Yugoslavia: 43,512

from BiH, 11,010 from Serbia, 7,026 from Croatia, 6,495 from Kosovo, 5,582 from North Macedonia and 403 from Montenegro (Raičevič 2019).

The rest of the foreigners are from different countries and as of 31 December 2018 they were employed in Slovenia: 2,635 from Bulgaria, 1,268 from Italy, 1,417 from Russia and 1,107 from Ukraine. These are countries that employ more than 1,000 people. Fewer than 1,000 people were in 2018 employed from: Hungary 592, China 575, Romania 543, Slovakia 297, Germany 154, Turkey 133, France 130, Thailand 129, India 118, United Kingdom 121, Moldova 110 and the United States 86 (Raičevič 2019).

According to the statistics from November, in 2018 the majority of foreigners in Slovenia were employed in construction jobs (around 21,000). This was followed by employment in manufacturing (nearly 17,000), transport and storage (around 13,500) and just under 4,000 foreigners in the hospitality industry. 2,200 people were employed in various technical, professional and scientific activities and around 1,000 were employed in social care and health (Raičevič 2019).

The drastic lack of certain professions in the Slovenian labour market is one of the main reasons why employers decide to hire a foreigner. Another reason is the lack of technical knowledge, skills and experience of the candidates. All of this is also about the unwillingness of Slovenian workers to perform jobs that have been stigmatized by society to be of less value.

## Methods of Finding Foreign Personnel and Participants in the Search Process

There are several ways of finding foreign personnel (Pušnik 2015):

- by social networks,
- through a network of HR professionals,
- by different HR agencies and
- by recruitment companies to find foreign personnel.

In the last year, recruitment agencies and foreign recruitment companies have decided to search for personnel by so called job fairs in the country from which they want to recruit a foreign. Employment events in BiH and Serbia are on the rise. Namely, these countries are said to have many workers with occupational profiles, which are drastically lacking in Slovenia and receive here a substantially higher salaries for the same work. That is why we are interested in them and the attendance at such events is numerous. Job

fairs have the following advantages over other forms of personnel search:

- You can have more interviews at the booth than you would otherwise (for a large number of foreigners from BiH and Serbia is too expensive to travel to Slovenia and they can't afford it).
- You meet the candidates personally and make personal contact with them. Also, a foreigner can get first-hand information about a company looking for workers.
- Candidates can have interview immediately without applying for it and waiting for an invitation for the interview or without waiting for a response.

### Employment Process for a Foreign from Bosnia and Herzegovina and Serbia

In the process of hiring a foreigner, it is crucial from which country he comes from, since the recruitment procedures vary considerably from country to country. As mentioned in the introduction, for citizens of the members of the European Economic Area (EEA) applies free movement of labour, while for third-country citizens it does not. In the following, we will focus only on the countries: BiH and Serbia.

### Documentation in the Employment Process for a Foreigner

It is common for all foreigners that when the employer decides to hire him/her, he must provide all the necessary documentation that the employer will need in the process of obtaining a work permit or a single residence permit and work for the foreigner.

Documentation that foreigner must submit/provide to the employer (see http://evem.gov.si/evem):

- personal photo (as for the passport),
- certified copy of the passport,
- certified copy of driving license (when hiring a truck driver for example),
- certified copy of the certificate of completion of education or diploma,
- certificate of work experience (if required by PDM-KTD form; Job vacancy notice – labour market surveillance),
- a signed foreign authorization (in case the foreign procedure is regulated by the employer or intermediary),
- original certificate from the criminal record of impunity,

- proof of commercial health insurance (sometimes arranged and obtained by the employer at his own expense) and
- certificate that he or she was registered at their Employment Service (until 2019 applied only to BiH citizens, now applies also to Serbian citizens – the latter also apply that a Slovenian employer can employ them even if they do not meet the unemployment conditions, but it is about the professional employment of an individual).

The employer must also prepare part of the documentation for the employment of the foreigner. As stipulated by the Employment, Self-Employment and Work of Foreigns Act (Zakon o zaposlovanju, samozaposlovanju in delu tujcev (ZZSDT-UPB2) 2018), during the procedure the latter must arrange for the preparation or signature:

- employment contracts with the right foreigner information, salary, job and duration of employment,
- statements that, as an employer, he or she provides accommodation for a foreigner,
- employer authorization (in case the employer procedure is regulated by an intermediary),
- statements and evidence that, as an employer, he or she has invested at least EUR 50,000 in the activity in which the foreigner is going to work before applying for a single permit for the employment of a foreigner (applies only to employers who are registered for less than six months).

### Steps in the Employment Process for a Foreigner

The Employment, Self-Employment and Work of Foreigns Act clearly sets out all rules on the employment, self-employment and work of foreigners. The employment process of foreigners between the two countries (BiH and Serbia) differ slightly; for citizens of the Republic of Serbia the process is shorter and consequently faster (from September 2019, we have an Agreement between the Government of the Republic of Slovenia and the Government of the Republic of Serbia about the employment of citizens of the Republic of Serbia in the Republic of Slovenia). While Serbian citizens can enter our country and stay, employ and work obtain only a single permit for residence and work, BiH citizens must obtain a work permit beforehand. For the latter conditions of employment and procedures for issuing work permits stipulates the Agreement between the Government of the Republic of Slovenia and the Council

of Ministers of BiH on the employment of BiH citizens in the Republic of Slovenia from 2013. It is important to note that the process of obtaining a work permit will almost certainly be successful and quickly resolved if a foreigner will be employed in a job that requires deficient occupations. According to ZRSZ (see https://www.ess.gov.si/delodajalci/zaposlovanje_in_delo_tujcev/kontrola-trga-dela) deficient occupations continue to be: welders, heavy truck and tractor drivers, toolmaker, turner, electrician, bricklayer, carpenter, chef, electromechanic, sales specialist for ICT products and services, developer and software and applications analyst, and expert on databases and computer networks.

We present the more detailed steps in the process of hiring a foreigner from BiH or Serbia below.

*Step 1:* The PDM-KTD or the Job vacancy notice – labour market surveillance should be published on the ZRSZ. Labour market surveillance is compulsory for the employment of a foreigner from third countries. In doing so, the ZRSZ verifies the fulfilment of the requirement in the foreigner's recruitment process that there are no suitable persons or candidates for employment in the Slovenian unemployment register.

*Step 2:* Within five working days of receipt of the PDM-KTD form, the ZRSZ issues a notice if there are any unemployed persons in their records who would fit our call. If there are no suitable persons, as an employer we continue the process for employment of a foreigner (obtaining a work permit or a single permit for residence and work). The application for authorization must be submitted no later than 30 days after the issuance of the ZRSZ notification. If the ZRSZ finds suitable persons in the Slovenian unemployment register, employment of a foreigner is not possible. In such case, candidates can only be sought on the Slovenian labour market (see https://www.ess.gov.si/delodajalci/zaposlovanje_in_delo_tujcev/kontrola-trga-dela).

*Step 3:* Obtaining a work permit is the next step for BiH citizens. Based on this document, the employer can conclude an employment contract (Grofelnik and Premk 2009, 263). The application is submitted by the employer to the ZRSZ on the form TUJ-BIH-1. A foreigner who wants to get a job must be registered with the Employment Service of BiH for at least one day (see https://www.ess.gov.si/tujci/delo_v_sloveniji/zaposlovanje-drzavljanov-bih).

Following the application, the Bosnian Employment Service requires from the employer:

- a signed contract of employment by the employer,

- a certified copy of the foreigner's passport,
- a certified copy of the certificate or diploma and
- a telephone number of the foreigner.

All documents can be submitted by the employer in PDF format by an e-mail, but only after they have received a request from the BiH Employment Service.

If all the documents are in accordance with the regulations and the Employment Service of BiH issues the consent for employment of their citizen with us, the Slovenian ZRSZ issues a work permit, which is always issued for a period of 3 years. In this case, the foreigner must be employed by the employer who obtained his work permit for the first 12 months, or by his legal successor. During the remaining 24 months of the validity of the permit, any other employer can employ the foreigner, since during this period he is free to enter the Slovenian labour market. After the validity of the work permit, this may be renewed under the terms of the Agreement (see https://www.ess.gov.si/tujci/delo_v_sloveniji/zaposlovanje-drzavljanov-bih).

During this time or step, the foreigner should be referred to his/her nearest Slovenian embassy where he/she submits his/her fingerprints. This is a later requirement for the issue of a single residence and work permit.

*Step 4:* The next step is to obtain a single residence and work permit. We already submitted the application for the citizens of Serbia in Step 2, since in 2015 the procedure was simplified and the single permit merges and replaces the previous residence permit and work permit. For BiH citizens, this is only regulated after obtaining a work permit.

The application for mentioned permit should be submitted to the competent administrative unit. The single permit for residence and work (ED) is issued in the form of a card and is so called decision issued by the administrative unit in agreement with the ZRSZ (see https://www.ess.gov.si/delodajalci/zaposlovanje_in_delo_tujcev/vrste_soglasij_in_pogoji). The application must be accompanied by the following documents:

- a certified copy of the passport,
- a certificate from the criminal record of impunity (not to be older than three months),
- employment contract signed by both parties (employer and foreigner),

- proof of commercial health insurance (concluded for at least one month),
- a certified copy of the certificate or diploma and
- any other evidence of compliance with the conditions laid down for the issue of the type of authorization concerned.

In case that any document is written in Cyrillic, a certified translation in the Slovenian language must be submitted (Upravna enota Ribnica 2017).

An ED is subject to the payment of a fee and the cost of issuing an ID. A taxpayer whose ED is issued on the basis of a work permit previously issued under an international agreement is exempt from the fee and pays only the application fee (Upravna enota Ribnica 2017).

Issuing an ED generally takes up to 15 days. Once the permit has been issued, the administrative unit, upon agreement with the employer, sends it to the embassy, where the foreigner has already submitted his fingerprints at the beginning of the employment process. When the embassy receives the ED, it informs the foreigner that the document is ready for pickup. He has 7 days for the ED to take over. The employer then has exactly 15 days to hire him from the day the foreigner picked up ED at the embassy. This means that on the 15th day after the pickup, a foreigner must already be in Slovenia and spend his first working day at work.

*Step 5:* Once we have obtained an ED for a foreigner and have been taken over by the Embassy, the employee's arrival process is initiated. This means that the employer and the foreigner agree on which will be his or her first working day so that he or she can organize his/her arrival in Slovenia in time.

During the procedure, the employer must also provide (if he wishes) accommodation for the worker. There are two options: either he has available accommodation (most often a room in a multifamily house or larger apartment), or finds suitable accommodation for a foreigner. It happens, however, that foreigners in Slovenia have relatives or friends and organize accommodation themselves.

*Step 6:* When a foreigner arrives in Slovenia, he reports to the employer on the day as agreed. Before the start of his/her first workday, a foreigner must settle several matters, namely:

- have a preliminary medical examination (organized by the employer),
- take an occupational safety exam (organized by the employer),
- declare temporary residence (at the Administrative Unit),

- obtain a Slovenian tax code (at the Financial Administration),
- open a personal transaction account at the bank (at the selected bank) and
- arrange additional insurance (at the selected insurance company).

Upon arrival in Slovenia, the foreigner signs an employment contract with the employer again, which must, in substance, be the same as the one they signed at the beginning of the foreigner's employment process. The difference is that the new contract will specify the duration of the employment. Once the contract has been signed and the foreigner has settled all of the matters listed above, he may start to work from the next day.

*Step 7:* Once the employer has settled all matters related to the pre-employment process, he may also carry out the latter by registering a foreigner with compulsory health and pension insurance (Form M-1).

### Obstacles and/or Difficulties During and After the Employment of the Foreigner

The process of hiring a foreigner has been simplified administratively in recent years. It is much easier for nationals of the members of the European Economic Area and Swiss nationals than for foreign nationals coming from third countries. Nonetheless, many employers face various difficulties during or after the employment process of a foreigner.

Many employers face problems early on. Namely, if one does not sufficiently inquire about all the details of the process itself, and what to look out for, it can quickly lead to complications that sometimes even lead to the termination of the foreigner's employment. Insufficient information and unfamiliarity with the process also leads to insufficient and unregulated necessary documentation. It is therefore of the utmost importance that the person conducting the process of hiring a foreigner is aware of the process, from an administrative, time, and legal point of view. If this is not possible, it is best for the company to use an external business partner (for example staffing agency) that has qualified employees for the process.

Another obstacle we can face right from the start is that we are dealing with the employment of a foreigner who is unresponsive, disobedient, incorrect … We know that the candidate must provide more documents and certificates, which are the basis, that the employer can initiate the employment process. If it fails to do so, the

timeframe is extended. This causes a great deal of dissatisfaction with most employers, as everyone wants to complete the process as soon as possible and the foreigner starts to work.

An obstacle that we face regularly in practice and cannot be influenced by is the responsiveness of the institutions. Although all institutions and offices have statutory deadlines for issuing certificates, permits, consents, and the like, responsiveness is contingent on the amount of applications pending.

Even when the employment process is completed and the foreigner joins us in the work environment, we as an employer may face obstacles or difficulties. The first problem is certainly the foreigner's lack of knowledge of the Slovenian language, which causes communication barriers. How important this problem is depends on the job. Many Slovenes, due to the former common state and the great similarity between the languages, thankfully, do speak or understand (or both) Croatian, Serbian or Bosnian, which makes it easier for the foreigner (and the employer) to communicate with each other.

Another problem that employers repeatedly encounter is that a foreigner finds it difficult or impossible to manage their life in a new environment. The fact is that our social and work culture is almost certainly different from the country our foreigner comes from. And if he/she does not find a company close to him/her (by tradition, customs, rules, etc.), he/she feels lost. Therefore, it is important for the employer to help him/her join the workforce, so that the foreigner can get to know the new environment as quickly as possible through co-workers and thus make new acquaintances that will help him/her. Often, citizens of the former Yugoslav Republics have no interest in joining Slovenian society. The reason is probably that there are so many of their fellow countrymen in Slovenia that they do not see any greater sense or need in adapting to the new environment.

A big problem in companies is discrimination against foreigners. This is especially true for citizens of the former Yugoslav Republics and southern countries (Bulgaria, Albania, Romania, etc.). For no good reason, foreigners are treated worse by associates (including leaders) simply because they are of another race, ethical background, religious belief, and the like. It is often the case that foreigners tell the superiors, but they do not act. In such cases, the work environment forces the foreigner to either subordinate or go to another employer or back to his/her country if the work permit does not allow him/her to do so.

Discrimination is also closely linked to harassment in the workplace. Although the Employment Relationships Act (Zakon o de-

lovnih razmerjih (ZDR-1) 2013) clearly defines what an employer is obliged to do, what kind of work environment it must provide and what measures it must take to protect workers, this is often not the case. The citizens of BiH, Serbia and other southern countries are also often the most affected.

Here are some key factors that we can use to predict an individual's performance abroad (Jerala, Podgoršek, and Toš 2016, 11–5):

- openness (curiosity, originality, intelligence – interest in learning new things, ready for new experiences),
- emotional stability (allows them to be more positive and confident, easier to handle problems),
- conscientiousness (organization, consistent performance of tasks, work performance),
- self-efficacy (the individual's ideas about his own abilities, high motivation),
- cultural sensitivity (adaptation to another environment and culture),
- previous experience (very welcome),
- family status (affects his well-being, work, and work motivation),
- social support (social network) and
- organisational support (information, emotional support, assistance with finances, family).

### Onboarding and Integration of a Foreigner into the Collective

It is very important how the employer will arrange the foreigner's onboarding and integration into his collective in order to minimize the problems. In Slovenia, the term 'onboarding' is used more and more frequently to integrate a new employee into the company.

Onboarding is a carefully planned process of integrating a newly hired person, or associate we have transferred into the work environment. In integration, it is crucial that the newly recruited employee, especially the foreigner, feels welcome, accepted and part of the organization. The goal of such planned integration for the employer is to help the new employee to adapt to the new job easier and faster in both social and performance aspects (Ferk and Boštjančič 2015, 5).

Suggs (in Ferk and Boštjančič 2015, 7) says that onboarding must be designed to benefit both the individual and the employer. He also

mentions that a new employee needs to have a very good understanding of their employer's vision and goals. At the same time, he or she must be familiar with the resources to which employee can turn when he or she wants or needs to draw on the knowledge that is in the organization and important information to work with. Of course, it is the job of the employer to provide the new employee with everything they need and will need in introducing and mastering their job. And when it comes to being a foreigner, it is highly recommended that the content, and more, is prepared in a language that the person understands. Only in this way can we avoid unnecessary inconvenience due to language barriers.

The main benefits of systematic foreigner integration are (see https://www.smartsheet.com/employee-onboarding-processes-plans-best-practices-flowcharts):

- a sense of acceptance and a sense of being part of an organization,
- a clear picture of what is expected of him/her at work,
- he/she will be better and faster accepted by colleagues and
- faster knowledge transfer from employees to foreigners.

For successful onboarding of the foreigner in practice we can do the following (Employee onboarding processes: plans, best practices, flowcharts n.d.):

- at first we friendly accept the foreigner to the company and show him/her the company if we have not already done so,
- introduce him/her to colleagues and highlight his/her potential major successes and what its contribution to the company means,
- introduce him/her the internal rules (rules, regulations) that he/she must be familiar with,
- introduce him/her to a mentor who will regularly follow him/her during his/her probationary period,
- prepare a deployment plan for it and accurately inform it,
- introduce him/her to his/her post,
- we arrange with him/her any other formalities (contract signature, e-mail address, card for recording working hours, etc.),
- regularly monitor his progress (daily, weekly, monthly) and discuss the results with the foreigner,
- we are constantly available for help and additional questions (the first address for this is his/her mentor, then the head of the department, the director).

### Knowledge Transfer to a Foreigner

When we hired a foreigner and brought him/her into the company, the knowledge transfer began for him/her. At the outset, he/she must become familiar with the various rules and regulations that apply to the company, the procedures and how it works. This is where the knowledge transfer that is most valuable to the organization begins.

The job description itself states what knowledge and to what extent the employee must have for the job. He brings his formal knowledge with him, which is often not the same, as in the case of workers from BiH and Serbia, as is required for his post. It also brings the informal, which in most cases is decisive when hiring foreigners. Regardless of the knowledge that an individual brings to the company, the way and the work process can be completely different from the previous ones that the foreigner has already done. In order for the latter to be able to perform his work well, efficiently and above all correctly, it is essential that the knowledge of his colleagues, which is necessary for his work, is imparted to him. In practice, this occurs as part of mentoring, as the mentor is the one who introduces the foreigner into the work. The mentor and the foreigner collaborate on a daily basis and knowledge transfer is ongoing, either through conversation or through various media (e.g. CDs on a CD, protocol of a leaflet procedure, etc.).

Nevertheless, knowledge transfer can be 'stuck' despite good onboarding and a good relationship between a foreigner and a mentor. Therefore, it is necessary for the associates to be trusted and have more teamwork and training. It is also recommended that the foreigner and other employees, when arriving at the company, alternate between jobs so that they get to know each other more closely. This allows all the articles in the chain to understand the workplace and realize that, for example, storekeepers need certain knowledge and skills to be able to perform their work qualitatively. Alternating also brings knowledge from a completely different field and it may appear as a solution to some of the problems in the processes of another department.

We should inform the foreigner at the beginning of the deployment that in the organization we do not own knowledge, but share it and promote socialization among our colleagues in order to transfer knowledge and good practices. An important task of the employer is to constantly motivate the foreigner to further his/her education and thus increase his/her own and organizational competitiveness.

Employment of foreigners in Slovenia, with an emphasis on for-

eigners from BiH and Serbia, remains open in our labour market. In fact, forecasts indicate that many professions will be in short supply, which means that demand was higher than supply. This is especially true for manufacturing professions such as mechanical engineering, transport, catering, etc. Up to now, the majority of workers have been recruited from BiH and Serbia to perform work in the mentioned fields, as they are considered to have a large number of suitable candidates and are ready to accept the working conditions offered by Slovenian employers. Certainly contributing to the successful employment of a foreigner is the knowledge of how to find suitable candidates, all those involved in this procedure, and knowledge of the recruitment procedures of a foreigner from BiH and Serbia. With all of the above, the employer should be aware of the good onboarding and integration of the foreigner into the work environment, as well as the necessary activities for knowledge transfer.

## Research and Management Suggestions

Our research, among other things, was intended to investigate and determine which method of on-the-job training employers most commonly use and to verify our hypothesis we have made analysis and interpreting the data obtained.

### METHODS AND CHARACTERISTICS OF THE SAMPLE

We used quantitative research for verification purposes. The survey was conducted with the help of a survey questionnaire, which was created in the web application 1KA. To interviewed companies we sent an e-mail to their publicly available e-mail addresses explaining the purpose of the survey and adding a link to access the survey website, specifically to the heads of human resources and heads of human resources management departments.

The sample or population was represented by Slovenian companies of different sizes and selected activities, which were published in the electronic format of TDS (Telephone Directory of Slovenia), while trying to follow the structure of entities in reality (company size). 5,000 companies from different industries were randomly selected. The survey was conducted between June 30 and July 9, 2019. 830 (16.6%) respondents answered the survey and 339 (6.78%) respondents filled it out completely.

The collected data were analysed using the SPSS software tool, and the results were presented using tables. Descriptive statistics were used to determine the characteristics and composition of the sample, and the hypothesis was tested using inferential statistics. First,

TABLE 1 Overview of Survey Completion Data with Respect to Completion of Survey Completion

| Completed | Partially completed | Total appropriate | Total inadequate | Total |
|---|---|---|---|---|
| 284 | 55 | 339 | 491 | 830 |

we used the calculation of $\chi^2$ for the variables tested and their distributions, but since the latter was not uniform, we used the largest percentage of the possible answers to test the hypothesis.

The limitations of the survey were, in the end, reflected in the respondents' perceived unresponsiveness and in the large number of incorrectly or incompletely filled surveys.

## BASIC ANALYSIS OF DATABASE VARIABLES

First, we asked the respondents about the industry, size and age of the company, the number of employees and the region of the company's headquarters. A total of 339 questionnaires were completed (table 1).

182 (53.7%) micro, 97 (28.6%) small, 49 (14.5%) medium-sized and 11 (3.2%) large companies participated in the survey. In the sample structure, the proportion of large firms was larger than the structure in reality, but large firms had greater employment needs.

According to the industry 78 (23%) companies come from construction, 62 (18.3%) in motor trade, maintenance and repair of motor vehicles, 39 (11.5%) in manufacturing, 35 (10.3)%) in the catering industry, 22 (6.5%) in transport and storage, and 103 (30.4%) in other industries.

According to the region from which the surveyed companies come, 119 companies were from central Slovenia (35.1%), 44 from Gorenjska (13%), 37 from Podravska (10.9%), 35 from Savinjska (10.3%), 23 from Goriška (6.8%), 15 from the Coast and Karst (15%), from Koroška and Notranjska each 13 companies (3.8%), 12 from Posavje (3.5%), 10 and 11 (2.9% and 3.2%) from Pomurje and Primorsko-notranjska and from Zasavje 7 (2.1%). The result obtained was expected, as the largest number of companies is registered in central Slovenia, and Zasavje region is a rather small area.

Our research hypotheses were:

H1 *Existing employees welcome foreigners well or very well if the company cooperates in their integration into the work environment.*

H2 *Slovenian companies employ the most foreigners from BiH due*

TABLE 2 Employment of Foreigners in the Workplace, According to Employers

| Answer | (1) | (2) | (3) |
|---|---|---|---|
| Well | 66 | 19.5 | 60.6 |
| Very well | 40 | 11.8 | 97.2 |
| Bad | 3 | 0.9 | 100 |
| Total | 109 | 32.2 | |

NOTES Column headings are as follows: (1) frequency, (2) percentage, (3) cumulative percentage.

*to the fact that Slovenian workers do not want to perform a certain job or demand a higher pay for the same job.*

H3 *Most companies face discrimination against the foreigner when they are hiring him.*

H4 *Too much administration is the most common problem in the process of arranging documentation for the employment of a foreigner.*

### TESTING HYPOTHESES

Our research hypothesis H1 was: Existing employees welcome foreigners well or very well if the company cooperates in their integration into the work environment.

In the questionnaire, we asked the respondents the question 'How is a foreigner usually accepted into the work environment by existing employees?' They were able to choose from the following: very good, good, bad and very bad. The question was answered again by all those who employ foreign labour, i.e. 109 (32.2%) companies surveyed. As table 2 shows, as many as 97.2% of respondents or 106 companies chose positive answers, i.e. 'Very good' (40 companies or 36.7% of respondents) and 'good' (66 companies or 60.6% of respondents).

We examined the correlation between the selected variables, 'How a foreigner is usually accepted into the work environment by an existing employee' and 'Do you work with a foreigner to integrate him/her in the work environment' (Table 3). We find that the variables are positively correlated (Pearson's correlation coefficient is 0.239). This means that the more opportunities and ways to help the stranger integrate into the work environment are offered by the employer, the easier it will be for them and, consequently, the foreigner will be better accepted by existing employees.

Integrating foreigners into the work environment and acceptance of them by existing employees is, as other authors note (Jerala, Pod-

TABLE 3 Correlation between Inclusion of Foreigners in the Work Environment of the Company and Their Acceptance by Existing Employees

| Question | Item | (1) | (2) |
|---|---|---|---|
| (1) Do you work with a foreigner to integrate him/her into your work environment? | Pearson's correlation | 1 | 0.239 |
| | Significance (double test) | | 0.012 |
| | Sample | 109 | 109 |
| (2) How is a foreigner usually accepted into the work environment by existing employees? | Pearson's correlation | 0.239 | 1 |
| | Significance (double test) | 0.012 | |
| | Sample | 109 | 109 |

TABLE 4 Employment Frequency in Selected Countries by Employer Choice

| Country | (1) | (2) | (3) |
|---|---|---|---|
| Bosnia and Herzegovina | 109 | 2.20 | 2.300 |
| Serbia | 109 | 5.57 | 2.891 |
| Croatia | 109 | 6.44 | 2.584 |
| Hungary | 109 | 7.53 | 1.608 |
| Italy | 109 | 7.63 | 1.482 |
| Austria | 109 | 7.64 | 1.424 |

NOTES Column headings are as follows: (1) sample, (2) average, (3) standard deviation.

goršek and Toš 2016, 11–5; Ferk and Boštjančič 2015, 3), extremely important, as it also depends on knowledge transfer and skills between them. As we also find in our research, the acceptance of a foreigner into the work environment and the support of the company in its integration into the work environment are strongly interconnected, which is why we confirmed H1.

Hypothesis H2 was: Slovenian companies employ the most foreigners from BiH due to the fact that Slovenian workers do not want to perform a certain job or demand a higher pay for the same job.

In conducting the survey, respondents were required to select the country in a way by entering the number 1 in the country from which they employ the most foreigners, 2 in the next country from which they employ the most foreigners, and thus to a score of 6. It follows that the lower average score means that in Slovenia are employed the most foreigners from that country.

Below, we also needed to check the correlation of the variables of the two survey questions, namely 'Why did you decide to hire a foreigner: because Slovenian workers do not want to perform a particular job or require higher pay for the same work' and 'From which countries do you hire the most foreigners: BiH.' We found that the relationship was negative (Pearson's correlation coefficient was –0.046)

TABLE 5 Correlation between the Demand of Slovenian Workers for higher Pay and the State of BiH

| Question | Item | (1) | (2) |
|---|---|---|---|
| (1) Slovenian workers do not want to perform a certain job or demand a higher pay | Pearson's correlation | 1 | −0.046 |
| | Significance (double test) | | 0.633 |
| | Sample | 109 | 109 |
| (2) Bosnia and Herzegovina | Pearson's correlation | −0.046 | 1 |
| | Significance (double test) | 0.633 | |
| | Sample | 109 | 109 |

TABLE 6 How Many Companies Are Experiencing Difficulties in Hiring a Foreigner

| Answer | (1) | (2) | (3) |
|---|---|---|---|
| No | 77 | 70.6 | 70.6 |
| Yes | 32 | 29.4 | 100.0 |
| Total | 109 | 100.0 | |

NOTES Column headings are as follows: (1) frequency, (2) percentage, (3) cumulative percentage.

and that the variables were not interdependent (table 5). The research shows that employers mostly choose to hire foreigners from BiH, but not because Slovenian workers would not want to do a certain job or demand higher pay, so we only partially confirmed H2.

The H3 hypothesis was: Most companies face discrimination against foreigner when they are hiring him.

First, we have done an analysis of how many companies are facing difficulties when hiring a foreigner while joining a company. As table 6 shows, just under one third of all surveyed companies (32 and 29.4%) employing foreigners are facing difficulties.

Then we were able to test the hypothesis in terms of problems and their frequency. The respondents had a written set of problems and one vacancy where they could write a problem themselves that the questionnaire did not offer. For each of the problems they had to choose a value from 1 to 5, with 1 being never and 5 being very common. As table 7 shows, companies most often encounter foreigners' unwillingness to adapt to the new environment (2.91) and communication problems (2.69) when employing a foreigner. According to the results of the conducted survey, discrimination of foreigners by existing employees is in third place (1.66).

The impact on the acceptance of a foreigner and discrimination by existing employees has already been investigated by other authors (Vrečer et al. 2008, 7; Polajnar et al. 2001, 7), and they conclude that

TABLE 7 Frequency of Selected Employers' Problems

| Problem | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| The foreigner's unwillingness to adapt to the new environment | 11.558 | 31 | 0.000 | 2.906 | 2.39 | 3.42 |
| Communication problems | 9.412 | 31 | 0.000 | 2.688 | 2.11 | 3.27 |
| Discrimination against foreigner by co-workers (including managers) | 8.551 | 31 | 0.000 | 1.656 | 1.26 | 2.05 |
| Harassment against foreigner by co-workers (including managers) | 9.680 | 31 | 0.000 | 1.438 | 1.13 | 1.74 |
| Other | 4.000 | 8 | 0.004 | 1.333 | .56 | 2.10 |

NOTES Column headings are as follows: (1) *t*-distribution, (2) freedom rates, (3) significance (double test), (4) mean difference, (5) lower 95% confidence interval of difference, (6) upper 95% confidence interval of difference.

TABLE 8 Overview of How Many Companies Employ Foreigners

| Answer | (1) | (2) | (3) |
|---|---|---|---|
| No | 175 | 51.6 | 61.6 |
| Yes | 109 | 32.2 | 100.0 |
| Total | 284 | 83.8 | |
| Interrupted | 55 | 16.2 | |
| Grand total | 339 | 100.0 | |

NOTES Column headings are as follows: (1) frequency, (2) percentage, (3) cumulative percentage.

this arises from language barriers, unwillingness to adapt to the new environment, as well as in terms of political, psychological and sociocultural barriers. In our study, however, we also find that a foreigner's unwillingness to adapt to the new environment is the most common cause of employer's difficulties in integrating foreigner into the work environment. Due to the above and due to the results H3 is rejected.

Hypothesis H4 was: Too much administration is the most common problem in the process of arranging documentation for the employment of a foreigner.

When checking H4, we first checked how many surveyed and participating companies employ foreigners at all. As can be seen from table 8, 109 companies out of 284, who have completely filled out the survey, are employing foreigners. This represents a 32.2% share of our sample.

Then we checked how many were experiencing difficulties in hiring foreigners. To the question from the survey 'Do you have any

TABLE 9 Overview of How Many Companies Are Facing Difficulties in the Process of Arranging Documentation for the Employment of a Foreigner

| Answer | (1) | (2) | (3) |
|---|---|---|---|
| Yes | 59 | 17.4 | 54.1 |
| No | 50 | 14.7 | 100.0 |
| Total | 109 | 32.2 | |

NOTES Column headings are as follows: (1) frequency, (2) percentage, (3) cumulative percentage.

TABLE 10 Frequency of Difficulties in the Process of Arranging Documentation for the Employment of a Foreigner from the Perspective of the Employer

| Problem | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Too much administration | 49.723 | 58 | 0.000 | 4.695 | 4.51 | 4.88 |
| Too long legal deadlines | 47.722 | 58 | 0.000 | 4.678 | 4.48 | 4.87 |
| Unknowing the process | 12.400 | 58 | 0.000 | 2.356 | 1.98 | 2.74 |
| Foreigner not participating | 11.988 | 58 | 0.000 | 1.542 | 1.28 | 1.80 |
| Other | 5.286 | 14 | 0.000 | 2.467 | 1.47 | 3.47 |

NOTES Column headings are as follows: (1) *t*-distribution, (2) freedom rates, (3) significance (double test), (4) mean difference, (5) lower 95% confidence interval of difference, (6) upper 95% confidence interval of difference.

problems with the process of arranging the documentation for employment of a foreigner?,' 59 (54.1%) answered that they are experiencing difficulties.

After this, we then checked for the employment of a foreigner which problems are most common among the companies that are experiencing difficulties in the process of arranging documentation. Again, on this question, the respondents chose the value of the listed problems at their discretion with 5-point Likert scale, from 1 (never) to 5 (very common occurrence in practice). Employers emphasized 'too much administration' (4.69) and 'too long legal deadlines' (4.68) as the most common problem. A *t*-test was used to test the hypothesis, and the results are presented in table 10.

The average score of 4.69 points to the fact that companies face serious difficulties in managing the documentation for employment of foreigners. In practice, this may mean, in particular, that extensive and numerical documentation is required, which companies must obtain before employing a foreigner. In addition, according to the employers, the legal deadlines are too long, due to the fact that they are in a hurry to hire a suitable worker. According to the research findings, H4 can be confirmed.

We confirmed the H1 hypothesis as respondents were unanimous

that more options and ways to help a foreigner than an employer offers, make it easier to integrate him/her into the work environment and, consequently, be better accepted by existing employees. Employers are also increasingly aware of the need to respect and understand the employees. Personnel management has been transformed into human resources management, where each individual has his/her own value and his/her best possible integration into the work environment is very important and has a great impact on the quality of work of all. The awareness of the importance of good integration of the foreigner and assistance to the foreigner coincides with these findings. Improvements in the integration of foreigners into the work environment are seen primarily in the attitude of managers and co-workers towards the foreigner. A foreigner who came from another cultural background will need more time to adjust. Therefore, it is important that he/she be assisted and accepted in as many ways as possible: socializing with him/her even outside working hours, assistance in understanding the Slovenian language, assistance in legal matters to regulate his status, providing accommodation, mentoring, etc.

Based on the results, we found that employers employ the largest number of foreigners from BiH, but for reasons other than those we assumed in the hypothesis set out, we therefore only partially confirm the H2 hypothesis. The result is interesting and unexpected, as certain occupational profiles in Slovenia are lacking and there are still some suitable workers for some jobs for which they do not apply. From experience, we can note that Slovenian workers do not decide for employment with Slovenian employers because they receive a higher pay for the same job in Austria or Germany. From this we could also conclude that the employers' answers were not completely honest, or. we should conduct a specific survey related to the offered working conditions and the remuneration for the work performed. This data would then give us a more complete picture of the paradox that emerges when there are suitable workers in the domestic market, while at the same time companies are forced to employ foreigners in these jobs.

Regardless of this, the relevant candidates, to whom the working conditions of Slovenian employers are acceptable, are large in BiH and Serbia, but at the same time have extensive experience and necessary knowledge. The suggestions for improvement are similar to those for H1. It is essential to change the attitude of the company towards certain professions and to improve both working conditions and remuneration for the work done in those professions. Only in

this way we will avoid the growing shortage of suitable candidates in selected professions.

According to the results of the survey, we rejected the H3 hypothesis because the survey showed that when hiring a foreigner, companies most often encounter a foreigner's unwillingness to adapt to a new environment rather than discrimination by co-workers. We are sceptical of the result of this hypothesis, because in our experience discrimination against a foreigner is the one that causes the most problems for employers when hiring. Employers identified communication problems as the most common problem when hiring a foreigner. By the lack of personnel is most prominent especially in technical profiles, where the Slovenian language is not the most important prerequisite for the proper performance of the work, and the fact that the Slovenians are good at or understand or speak the languages of our former common state of Yugoslavia (most foreigners are employed right from BiH and Serbia), communication problems do not seem to us to be the honest answer. Here, too, we relate to the comment that we wrote about the result of the research in the comment for hypothesis H2. Regardless of the result of the hypothesis, we think that it is still too often the case that a foreigner is not properly accepted by his co-workers due to his nationality in the work environment, which in turn leads to job dissatisfaction, conflicts, demotivation … It is very important what kind of the leadership companies give, and that the they clearly state what is strictly prohibited (discrimination, etc.). Discrimination should not be tolerated, but whoever practices it must be held accountable. It may be worth pointing out here that in cases of employment of foreigners, we are aware of the fact that discrimination may no longer be present, because new employees from foreign countries come to a work environment where someone from their home environment may already be employed. The latter represent their stronghold and guarantee greater acceptance in the work environment and less discrimination. In the context of the communication problems, we suggest that employers offer foreigners a free Slovene language course and mentoring by a person who speaks his/her language.

We confirmed the hypothesis H4, because employers were exposed to too much administration and too long legal deadlines as the most common problem in the process of arranging documentation for a foreigner's employment. We expected the confirmation of the hypothesis at the beginning of our research. One of authors of this paper works in the field of employment of foreigners and from her own experiences there is too much administration in the process

of hiring a foreign person. We agree with the fact that documentation must be transparent, but in the age of information technology, we can use it in a better way. Since, in line with the theoretical part of the research, the state itself is aware of the need to shorten and simplify administrative procedures, it is first necessary to start amending the legislation. The procedures have been simplified in recent years, but the employment of foreigners is increasing and the need for change is increasing. It can optimize the current method of data entry by computerizing work processes, which mean faster process execution and consequently lower costs.

## Conclusion and Proposals for Management

The focus of our research was to identify and explore the field of employment of foreigners in Slovenia, with an emphasis on the employment of foreigners from BiH and Serbia. The fact is that we are currently in a period where the suitable candidates are hard to find. Especially when it comes to jobs that require a profession that is lacking in Slovenia. The decisions of schools in the last century, when they gradually stopped the education of certain professions due to the lack of demonstrated interest of students, today show consequences. In the labour market, there is a severe shortage of car repairers, processors, construction workers, catering workers, truck drivers, and workers in storage and so on. Although employers are trying to attract domestic workers, working conditions are still considered difficult for these professions and wages for our situation too low.

As a result, more and more employers are choosing to hire a foreigner. The payment offered by the Nordic countries for the abovementioned professions, which is often the central criterion of an individual for applying for a job, cannot be overcome in Slovenia. Much better living standards and significantly better pay can be offered to workers from the countries of the former Yugoslavia. Since there are many desired profile workers there, hiring a foreigner from BiH or Serbia is a completely logical decision. Employment of foreign workers has been on the rise for a long time, so Slovenia has decided to ease the procedures for their employment. Although these are still not optimal, they are much faster and simpler. Regardless, employers are still very often faced with various obstacles and difficulties in their implementation.

Experts believe that if employment of foreigners continues until at least 2020/2021, such as forecasts for economic growth, our country will have to take even more steps to obtain the necessary labour

force for our labour market. First, by reducing or even eliminating certain administrative procedures, which would facilitate the acquisition of permits for foreign workers and shorten procedures (Čepar 2019).

The labour force, especially in areas requiring a profession that is classified as deficient in Slovenia, will continue to lack. According to Gornik Dušič (2018), we can be convinced of the growing need for personnel from foreign countries who are ready to work for the salaries our economy can offer, taking into account our aging population and the departure of Slovenians abroad. If we are to continue to be economically stronger, we need to be very aware of the gap between supply and demand in the labour market.

In order to change the current situation, it will be necessary to make other decisions related to this topic, in addition to additional measures for obtaining the missing workforce. Among other things, it would be necessary to re-establish the education system for 'extinct' professions and change their outlook. Mainly because they will start to interest young people and see the potential of employment in them, along with a good salary and good working conditions. It should be borne in mind that workers from foreign countries cover our shortage of specific occupations, which can have long-term adverse effects (Mohamed, Ramendran, and Yacob 2012). Some knowledge will be lost due to the ego, and the dependence on certain jobs and tasks on foreign workers will increase significantly, since we will no longer have any domestic workers.

Employers are encouraged to remain friendly to foreigners in terms of providing full support for their integration into the living and working environment. Support is crucial if we, as an employer, want to ensure a good working environment, without discrimination and unnecessary disputes, focused on productive work. We all certainly agree that only the right working climate produces positive results. Full support is also the least that an employer can offer to a foreigner who comes from a completely different environment and has to adapt to a new culture and often does not even speak our language. Last but not least, a foreigner brings with him/her a new knowledge that will certainly further enrich the existing internal knowledge base of an organization.

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# Relationship between Generic Skills and Employability Skills: An Exploratory Study in the Context of New Zealand Postgraduate Education

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The lack of employable-ready graduates has been an issue for New Zealand Tertiary education providers. Besides universities, Institutes of Technology and Polytechnics (ITPS) in New Zealand contribute a larger proportion of training employees to the job market. The objective of this study is to evaluate how the generic skills delivered by ITPS contribute to graduates employability skills. A literature review was carried out to investigate the most important generic skills for the present New Zealand job market. Data collected and analysed from three groups of participants. The results of this research provide an understanding of how graduates successfully acquire their generic skills during their studies in ITPS and the findings explain how graduates acquire and improve these generic skills. The results indicate that most graduates start their studies at ITPS with some generic skills, however, all of them agree that study at ITPS enhances these skills.

*Key words:* generic skills, hard skills, soft skills, employability skills, thematic analysis

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## Introduction

The value of a degree to offer employability is diminishing in tertiary education (Jassal and Clark 2016). In 2016, Pricewaterhouse-Coopers indicated that both graduates and employers had concerns about whether the investment in a university qualification is able to improve graduates' employability level. Ideally, students are supposed to graduate from their Tertiary Education Institutions (TEI)

with their expected skills, to meet the requirements of relevant industries in their careers. Whereas, Ferguson (2010) conducted research which showed that neither employers nor students understood what were the exact skills and capabilities received from their qualifications. Sometimes the qualification did not even match the industries' needs. Without a clear understanding of required skills from both perspectives, the value of tertiary education qualification would be reduced. As a result, the gap between graduates and work-ready graduates has been an issue for tertiary education providers which needs to be discussed and improved (Ferns, Dawson, and Howitt 2019).

Ako Aotearoa National Centre for Tertiary Teaching Excellence (Duignan et al. 2018) reported that employability skills are vital for finding and retaining a job. Employees are essential as part of the functional chain and are required to have particular employability skills to perform well in their daily jobs, and therefore students (future employees) need to be prepared with employability skills prior to graduation (Cabellero and Walker 2010). Compared to some targeted skills in certain industries, generic skills could be gained by students during studies in tertiary institutions. Mayer (1992) defined generic skills as these which are able to be applied to any workplace, instead of skills specific to a certain occupation or industry. Kearns (2001) showed that generic skills are basic skills necessary to obtain and retain employment. Moreover, Bridgstock (2001) emphasised the importance of generic skills as transferable within diverse occupations and positions, contributing to sustainable and immediate employability. As a result, generic skills are essential elements which could determine employability skills. In order to gain employability skills, Cassidy (2006) demonstrated that such could be directly delivered through the teaching process, in terms of specific educational practices, such as teacher attribute and skill acquisition.

New Zealand is well known for its tertiary education. The study of Fraser et al. (2019) pointed out that Institutes of Technology and Polytechnics (ITP) in New Zealand, as compared to Universities and Private Training Establishments (PTE), tend to enrich their students with multiple employability skills. To achieve this target, ITPs normally provide a set of class activities, workshops, projects and internships offering opportunities for students to practice their skills.

A significant amount of literature was published on generic and employability skills, but most of them contained theoretical information, and offered policy recommendations and perspective advice (Wickramasinghe and Perera 2010). The majority of these studies

focused on examining the experiences of difference TEIs and the remedial actions taken to satisfy employers by improving skills of graduates. Several issues were identified in this research and they are: meeting the skill expectations of graduates after completing their studies, skills mismatch between graduates gained during their studies and what industry needs and gap between graduate and work-ready graduate in terms of skills. This research aims to explore how generic skills gained by graduates from management qualifications in New Zealand ITPs, contribute to their employability skills.

## Literature Review

Every TEI, is facing crucial changes in teaching students in this rapidly changing business world (Bedwell, Fiore, and Salas 2014). The conventional approach in the teaching and learning process is mainly based on knowledge delivery. This is questionable at present, as a result of the new knowledge required in emerging jobs (Singh and Gera 2015). Problem solving and critical thinking should embrace dynamic trends of experiential learning within the entire spectrum of expertise. This includes emotional, rational and spiritual knowledge (Bolisani and Oltramari 2012). A study by Massaro, Bardly, and Garlatti (2016) showed that business schools are very slow in adopting ethical principles and soft skills. Only a fraction of generic skills is practiced within the business school curricula (Bratianu and Vatamanescu 2017). The gap between expected outcomes of study and actual performance, might lead to difficult challenges for graduates, and negative feedback on the education providers. Hence, it is crucial to address, or at least discuss this issue, in order to offer quality education to students. As a result, this research proposes to evaluate how skills gained before the students graduate contribute to their employability skills.

## Generic Skills

According to the study of Mayer (1992), generic skills, compared with other specific skills, could be applied to general industries instead of to a specific occupation. Curtis (2004) indicated that a skill is generic if it could be manifested by different observers in many different contexts. Besides as some hard skills generally required in various occupations, soft skills are also significant in the modern world with its nature of rapid changing. For instance, Chan and Fong (2018) identified communication, problem-solving and critical thinking as generic skills. These skills are critically based on industrial experience since they are beneficial for the efficiency and pro-

ductivity of work. These give a competitive advantage as they are intangible resources (Bratianu and Vatamanescu 2017). As a result, generic skills are valuable for graduates and students by increasing their opportunities for employability (Wickramasinghe and Perera 2010). Additionally, generic skills as the key set of skills for students who are looking to commence their career. Furthermore, Bratianu (2015) demonstrated that generic skills could directly contribute to dynamic knowledge in management as employability skills. The following section explains several generic skills which are directly connected to employability skills. In order to easily identify the generic skills, this research categorised them into soft skills and hard skills based on whether the skill was technology related.

Soft Skills. Generally, soft skills refer to human capabilities where behavioral and interpersonal skills are required to apply technical knowledge and skills while working (Weber et al. 2011). Moss and Tilly (1996) defined soft skills as technical or formal knowledge, in which traits and abilities are associated with attitude, personality and behavior. Kechagias (2011) defined soft skills as socio-emotional skills essential for career development, social interaction and employment success. Regarding soft skills in the management context, Marando (2012) suggested communication, leadership, influencing, decision-making, expectations management and problem-solving as examples. Innovation, not only technological but also non-technological, is one of the core competency skills for leaders to improve the productivity of their teams (Mohnen and Hall 2013). Based on the study of Martino and Bartolone (2011), the essential soft skills associated with innovation, comprised strategic influencing, quick study, passion and optimism, entrepreneurial orientation, communication skills, tolerance for uncertainty and the talent for relationship building and maintenance. Additionally, there is a skill, innovation leadership which is also related to innovation. Carmeli, Gelbard and Gefen (2010) described innovation as a leadership characteristic allowing leaders to encourage, orient, and improve relationships and to develop trust among teammates in the workplace.

As previously mentioned, contemporary research has investigated on many soft skills. Of all soft skills discussed and investigated in the literature reviewed for this study, only three soft skills were selected. The criteria for selecting these skills are widely discussed in the literature, and also how these skills are important in terms of employability in the New Zealand context. The selected soft skills for this study are; relationship building, innovation leadership and the tolerance for uncertainty. Additionally, these skills were exten-

sively discussed in the literature resources used for this study (e.g. Carmeli, Gelbard, and Gefen 2010; Kechagias 2011; Marando 2012; Martino and Bartolone 2011; Mohnen and Hall 2013; Weber et al. 2011).

Hard Skills. Rainsbury et al. (2002) stated that hard skills are a set of skills related to human technical knowledge. The concepts of hard skills in the management context has been listed as procedures, processes, techniques and tools (Azim et al. 2010). Furthermore, Marando (2012) described hard skills in project management, as the creation of the tangible delivery of a project in terms of schedules, diagrams, reports and budgets. Poisson-de Haro and Turgut (2012) described conceptual skills and technical skills, as hard skills, and they are core skills for managers. In addition, conceptual skills can represent cognitive practices such as curiosity, imagination and critical thinking (Scott and Vincent-Lancrin 2014). Of the hard skills mentioned above, three hard skills were selected for this research. They are the use of software, quick study, and conceptual thinking (Martino and Bartolone 2011; Rainsbury et al. 2002; Spencer and Spencer 1993). These hard skills have been investigated and discussed in detail in contemporary research. That was the main reason for selecting these three hard skills in this study.

### Employability Skills

A common definition of employability skills is the capability to gain a job offer after graduation and then to maintain employment. For example, Hillage and Pollard (1998) defined employability skills as the ability to be employed, retain the job and to change to other more preferable employment with satisfaction. Yorke (2010) redefined employability skills similarly, as the capacity to receive an offer at graduate level, to retain that job or even to develop in a further career. Besides, some literature explains employability skills as essential skills, attributes, knowledge and understanding. Moreland (2006) indicated that employability skills consisted of a set of personal attributes, knowledge and skills which contributed to individual success, and to security in a career. Regarding detailed employability skills, Singh and Singh (2019) described these as communication, problem-solving and analytical skills. Ademiluyi (2019) also presented the diverse employability skills needed by business graduates as reliability, integrity, decision making and willingness to learn. Similarly, Nalawade, More, and Bhola (2019) analysed and found that thinking skills, business communication, conceptual skills and priority setting skills were functional employability skills in manage-

ment. The above-mentioned employability skills used by Fraser et al. in their research in 2019. The same set of employability skills was used in this project and the reason was that they were associated with the generic skills related research discussed above. The employability skills selected for this research are communication, positive attitude, resilience, innovation, thinking skills, willingness to learn, teamwork, entrepreneurship, cultural competence and self-management.

The plethora of literature focused on employability skills and they agreed on a skill gap between what graduates have and what employers expected, but they are still debating how big it is (Dearing 1997). There is an increasing need for further research on graduates' transition to work and their early careers and therefore, TEIs need to focus on skills that graduates might need in future during their employability and employers expect them to have (Connor and Shaw 2008). There are limited studies investigated on hard and employability skills specifically focused on postgraduate students from management study area. It is important to supply skilled employees to workforce and it can be considered a as a priority area that requires immediate attention due to the nature of competitiveness and growth of business sector in New Zealand (Fraser et al. 2019). This research was designed to explore the relationship between generic skills and employability skills of management postgraduates in New Zealand from the viewpoints of graduates, lecturers and employers.

## Methodology

Qualitative data was collected using semi-structured interviews because it is a flexible method to achieve depth to this topic by probing and expanding the interaction between the interviewees and researchers. This project has two parts to achieve the research aim. First, the relevant literature was reviewed to identify generic and employability skills. Generic skills and employability skills have been predetermined through literature review and their importance in terms for finding employment in New Zealand as explained in the literature review section above. Second, semi-structured interviews were used to identify the relationship between generic skills and employability skills of graduates. The semi-structured interview questions were prepared based on the published literature (e.g. Bedwell, Fiore, and Salas 2014; Bratianu and Vatamanescu 2017; Carmeli, Gelbard, and Gefen 2010; Martino and Bartolone 2011; Wickramasinghe and Perera 2010).

Three participant groups interviewed during the data collection

process. As the first group, five lecturers teaching postgraduate management qualifications from different ITPS, were interviewed. The second group included five graduates who had successfully graduated with a postgraduate qualification from above mentioned ITPS studied management. The third group consisted of five employers, managers of the previously mentioned group of graduates.

Thematic analysis suggested by Braun and Clarke (2006) and systemised by Maguire and Delahunt (2017) was used to analyse the data. An additional step was added to compare the interview answers from graduates (employees), and employers (managers), to identify how graduates acquired their employability skills. As the first step, initial codes were generated, the main objective being to organise data in a systematic and meaningful way. The coding method was based on research questions. Every segment of text which seemed relevant to the research questions was picked out. At the end of this phase, codes from graduates and lecturers were extracted as preliminary ideas. In the second step, the employability skills revealed by the graduates were compared with the information provided by the employers. To capture everything significant or relevant to the research questions, themes were defined as patterns to connect the codes. Javadi and Zarea (2016) suggested that the codes might overlap among small data sets, which led to the next stage of preliminary themes. During the last stage, all the codes of graduates and lecturers extracted previously were fitted into broader themes. These themes were organised specifically in relation to the research questions.

## Findings and Discussion

The collected data were used to identify themes (and sub-themes) and 11 themes were identified. The themes were the degree of proficiency in skills, skills acquired or improved, skill contributor and skill outcome, feedback on course setting, relationship between employability skills, course expectation and setting, academic expectations, approaches and expectations (with sub-theme, essential activities and skills provider), how the generic skills were practiced (with sub-themes, generic skill practices and direct employability skill training), how the generic skills were mastered (with sub-theme, negation), and feedback on course setting.

The themes were built based on the objective narration of experiences and subjective description by each participant. For example, the themes degree of proficiency in skills and skills acquired or improved, described if the interviewees agreed with the interview questions that they gained the skills and how they evaluated their

present skills and the feelings. One graduate stated that 'can bring more structured and detailed procedures into daily work' (Graduate 3), which explained that she was able to implement the skill into her daily job. Whereas, another participant stated that 'I didn't learn new things, but my skill was improved' (Graduate 4). Additionally, graduates' above-mentioned skills were highlighted by employers e.g. 'quite critical thinking and analysing' (Employer 4) and 'I have seen continuous instances of reviewing and reflecting on processes' (Employer 5). It could be seen that even though graduates had relevant experiences while studying, outcome might be different in how they mastered the skills eventually.

Some themes were extracted based on the participants' real experiences while studying. For instance, theme skill contributor and skill outcome based on the explanations and reasons given by the graduates during the interviews. One interviewee indicated that 'The group assignment and being leader in my team contributed to the innovation and leadership skills' (Graduate 1). It was categorised under skill contributor. Similarly, when a graduate said that 'Studying here give me more skills of thinking like planning and time management' (Graduate 5), this showed the skill outcome. Furthermore, skill contributor and skill outcome showed how they measured and reached the training target. The majority of answers directly explained how graduates enriched themselves with targeted skills. For example, in order to train the students' use of software skill, a lecturer said that 'I have introduced new software in my class to develop their thinking while preparing their assignment' (Lecturer 4). This was strengthened by the statement made by an employer 'She was able to help us use more online tools, because she had really learned it herself and she taught it to us as well' (Employer 2).

When the graduate provided any feedback, which seemed directly to answer the research questions this was included into the feedback on course setting theme. In situations where extra information was provided, then this was considered as relationship between employability skills.

The themes, course expectation and setting, academic expectations, and approaches and expectations were developed and supported in accordance with the lecturers' following statements 'What is the original expectation of the course?' (Lecturer 1), 'How the course setting achieves the target?' (Lecturer 2) and 'What is the performance?' (Lecturer 5). For instance, course expectation and setting described the initial target of current course setting as 'expecting high level of conceptual thinking from all postgraduate stu-

dents especially for level 9 courses' (Lecturer 2). The lecturer indicated that the objectives of course settings were to give the postgraduate students practice in thinking conceptually, especially the master's students. Thus, this theme indicated that the course setting had been intentionally framed with conceptual thinking skills practice in mind. Also, the lecturers gave some clear directions to the students to ensure they understood what they were required to do such as 'need to spend hours in reading and mastering the topic' (Lecturer 1). Moreover, some participants offered extra information which provided valuable messages. For example, a lecturer said that 'What they lack for me is critical thinking or mind mapping about putting things and all factors together' (Lecturer 4), which implied that the students might need to fill the gap of critical thinking, and how they could achieve that. On the other hand, an employer (Employer 2) mentioned that his graduate (employee) had good critical thinking and analysing abilities when involved in processes.

The analysis based on data collected from the lecturers', academic expectations theme indicated what the academic team's primary explanations were regarding the teaching outcome. While they were designing the course frame, a variety of elements were considered, and included in the programme, such as class activities and assessments. Core knowledge delivery and generic skills practices were integrated into the course preparations. This was supported by the following statements provided by two different lecturers: 'The use of software is one of the cores of this course' (Lecturer 2) and 'Leadership skills plus innovation comes together hand in hand through my courses' (Lecturer 3). The lecturers have skills in course delivery, unique teaching methods and clear teaching targets, for example 'Short-term practice plus experiential way of teaching can train students with generic skills' (Lecturer 3). To practice the employability skills, the courses were planned to expose the students to an external environment which would enrich them with more practical experiences. This was highlighted in these two statements: 'The assessments focus on ongoing New Zealand organisations which needs students to talk to people from those organisations' (Lecturer 2) and 'They will expand their networks which contributes to the employability skills' (Lecturer 5).

The next theme is approaches and expectations, with two subthemes, essential activities and skills provider. The sub-theme, essential activities refers to all the requirements in the study and learning process. To acquire the target skills, the students had to follow the guidance accordingly. This is different from the next sub-

theme, as it might not be guided by the lecturers and explained as 'They have to do research online, so they are using internet extensively' (Lecturer 3) and 'It is a part of the assignment requirement for the students to conceptually think to certain level' (Lecturer 4). The sub-theme skills provider refers to all the factors which contribute to the students' generic skills while they were studying in ITPS. Those contributors comprise of assignments, class activities, available resources, and support from lecturers and relevant departments. These were covered in the following statements provided by the lecturers 'Both courses improve conceptual thinking and practice them in terms of assessment and group work' (Lecturer 1), 'They use on-line library for searching' (Lecturer 2) and 'I have introduced new software in my class to develop their thinking while preparing their assignments' (Lecturer 4). Some of the courses and on-campus activities directly enhanced the generic skills and employability skills of students. This fact was supported by 'We teach leadership skills in the paper Capabilities for Managers' (Lecturer 2) and 'There are a lot of activities going on campus in terms of relationship building like Diwali or Chinese mooncake festivals' (Lecturer 2). The sub-theme skills provider, described what the lecturers provided in order to develop students' generic skills. An employer stated about his graduate employee 'has a passion for developing her skills, very passionate about supporting the goals of the company and likes to research how to do things better' (Employer 3). The above employer's statement supported the theme of approaches and expectations highlighted by the lecturers.

To understand the relationships between the lecturers' expectations, and what graduates perceived, the theme of how generic skills were practiced was introduced with two sub-themes, namely generic skill practices and direct employability skill training. The first subtheme generic skill practices described what experience the graduates had in ITPS which contributed to these generic skills. The main contributors were group assignments, presentations and projects. They also had voluntary choices in terms of volunteer work, networking events, and participating as student service ambassadors. This fact was strengthened by employees' statements such as: 'I started as student ambassador', 'We have a lot of volunteer work and networking events which connect to recruitment people' and 'We practiced conceptual skill through a simulation game in Financial Decision Making' (Graduate 1).

The second sub-theme, how the generic skills were practiced, is direct employability skill training. This was the training that directly

connected to employability skills improvement, and was mentioned by participants as valuable study experience. They were exposed to this in their courses at ITPS such as cross-cultural management, entrepreneurship and innovation, capabilities for managers and professional project. The Project Management course was mentioned by more than one graduate who agreed that this paper was useful in their current employment. In order to support the above argument Graduate 2 stated that 'Project Management is a very useful paper as I learned not only follow the deadlines for the budget but also try to predict some uncertainties. I have practiced Enterprise Resource Planning in Microsoft Project Management which helped my hard skills'. Some of the above generic skills were confirmed by employers. Examples are 'works well in a team' (Employer 1), 'It is interesting being able to pick somebody and then having somebody that actually fits the criteria' (Employer 2), 'She is able to embrace all other cultures in the office' (Employer 3), 'is highly culturally competent' and 'is much loved and highly valued member of the organisational community' (Employer 4).

The concept of skills acquisition in tertiary education was summarised as the theme of how generic skills were mastered with one sub-theme, negation. This was evaluated by the graduates themselves regarding the extent to which they mastered the generic skills, and how they were able to reflect those generic skills in their job, as employability skills. The analysis showed that generic skills improved. Even though the participants might already have had the skills before, the study experience still improved their existing skills and supported them with 'I improved all of them except the Cultural Competence and Teamwork which were totally new to me' (Graduate 2), 'The current course setting has strengthened the abilities to be more creative' (Graduate 3) and 'Studying here give me more skills of thinking like planning and time management' (Graduate 5). Some participants said they were able to bring generic skills to their current workplaces. They also believed that they had the capacity and capability to cope with general problems and to develop themselves using the lessons learned. This fact was embedded in the following statements 'Tolerance of uncertainty, it depends on situation and what resources I have on my hand' (Graduate 2), 'I can apply my leadership skills on my present workplace' (Graduate 3) and 'I can find another point of view for problem with innovation skills' (Graduate 5). The sub-theme of how the generic skills were mastered is negation. This presented all the unsure and negative feedback regarding the study outcomes. The participants offered diverse

answers which lead to the sub-theme negation such as 'I didn't learn new things but only improved some of them' (Graduate 2), 'Conceptual thinking is a personal skill' (Graduate 3) and 'I am creative which is my nature. I don't feel studying at this polytechnic somehow affected us' (Graduate 4).

This analysis also considered lecturers' comments on current course content for the theme feedback on course setting. The lecturers provided their own opinions regarding course setting and skills training. It is surprising that the lecturers indicated more gaps than the graduates. This should be discussed and improved further. The main gap mentioned was the deficiency in course setting and students' initiatives. For example, by 'There is a need to focus more on conceptual thinking in the first few papers' (Lecturer 5).

This research was focused on graduates from New Zealand ITP sector and findings were important to future employers in terms of various generic and employability skills. The results showed the relationship between soft, hard and employability skills that current employers expect from graduates (figure 1). This study also reveals that how and what skills that employers and lecturers are looking from graduates and in what context. Additionally, it showed that how graduates acquired various skills during their academic journey in ITPs. The findings of the study will be helpful for future management students in terms of gaining their new skills.

## Conclusion

This project explored how the graduates acquired their generic skills (which are eventually developed as employability skills) during their studies in ITPs. There were different definitions available for generic and employability skills in the literature. These skills are essential to secure a job in New Zealand job market and they are very important in most management occupations. The soft and hard skills are the two categories of generic skills. The soft skills mainly are interpersonal and cognitive. These intangible skills are coherent with social participation and success in the workplace. On the contrary, hard skills are mostly associated with technical elements, cognitive in nature, and are affected by IQ when involved in procedures, processes and tools.

Contextually, employability skills could be considered as the evolution of generic skills enabling graduates to be ready in the employment market. During the literature review stage, three soft skills (relationship building, innovation leadership and tolerance for uncertainty) and three hard skills (use of software, quick study and

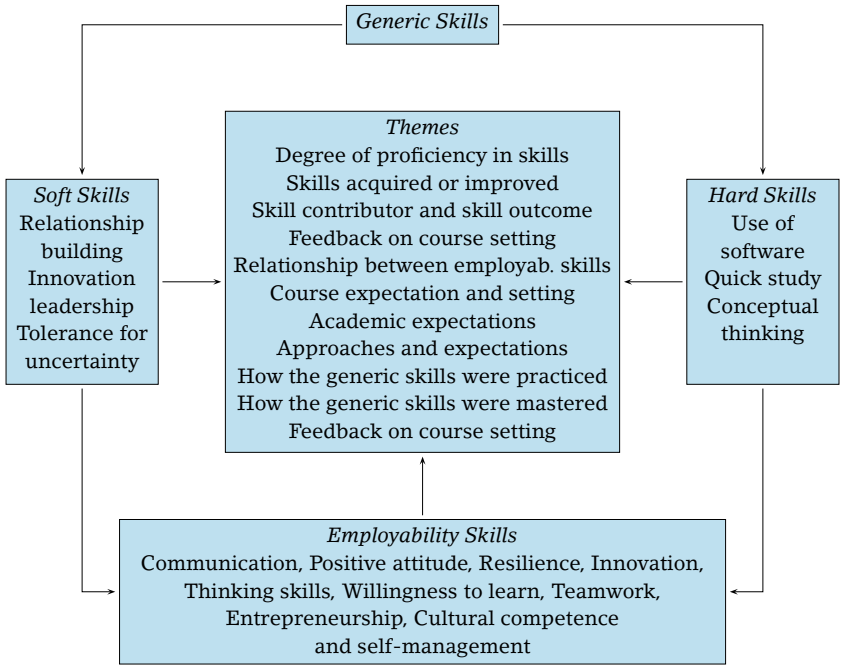


FIGURE 1 The Relationship between Generic Skills and Employability Skills to Themes Extracted during the Thematic Analysis

conceptual thinking) were identified for this investigation. Additionally, 10 core employability skills essential for obtaining and retaining a job in New Zealand were identified for the project. These employability skills were; communication, positive attitude, resilience, innovation, thinking skills, willingness to learn, teamwork, entrepreneurship, cultural competence and self-management. The coding process and thematic analysis technique was utilised to analyse data, and 11 important themes emerged during this process. These themes were; degree of proficiency in skills, skills acquired or improved, skill contributor and skill outcome, feedback on course setting, relationship between employability skills, course expectation and setting, academic expectations, approaches and expectations, how the generic skills were practiced, how generic skills were mastered, and feedback on course setting. Some themes emerged with sub-themes. There were approaches and expectations (with sub-theme essential activities and skills provider), how generic skills were practiced (with sub-themes generic skill practices and direct employability skill training), and how generic skills were mastered

(with sub-theme negation). The relationship between hard skills, employability skills and themes were identified and illustrated in figure 1.

The analysis of data collected from interviews showed the relationship of generic skills to the employability skills for the graduates from New Zealand ITPs. The result disclosed that the entire group of employers (managers) gave priority to graduates' employability skills. Based on their employees' (graduates) performances, employers justified each employability skill with sufficient explanations. After comparing the responses received from all three groups of participants (graduates, lecturers and employees), almost all the employability skills of graduates were recognised in the present New Zealand job market. When it comes to graduates' feedbacks, they also indicated that the study experience in ITPs indeed contributed to an increase in their generic skills. The graduates explained how they gained and improved their skills during their study period in the ITP through lectures, assignments, teamwork, class activities, various other study events organised by the institution and other off-campus activities. Most graduates stated that before their studies in ITPs, they were already equipped with some generic skills. However, all of them agreed that the study at ITP enhanced these skills. Additionally, they indeed learned some totally new skills by studying a specific course or participating in a specific activity. The group consisting of the lecturers in ITPs presented a much more objective and comprehensive understanding as to why and how the current courses and activities were designed. Many skills had been integrated to prepare the present ITP students for the way they had to meet the managers' expectations in the present New Zealand job market.

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# Germany – Tail Light Position in Digitisation: An Analysis of a Decentralised Tax Administration Based on the Digital European Society Index

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This paper describes the historical reasons for a decentralised tax administration in Germany and compares different structures. With special consideration of a five-step model for the digitisation in Europe and the OECD listed challenges, an in-depth analysis of the Digital Economy and Society Index (DESI) reveals Germany's weakening position in the European context. The DESI of 2019 was adapted to cover the essential determinants of the tax administration. This adapted DESI (a-DESI) value was linked to the gross domestic product (GDP) per capita 2019 in order to include the performance of the countries. For this in-depth analysis, the new key indicator Relative Digitisation Efficiency (RDE) was developed and revealed that Germany is at the bottom of the league in digitisation, although the GDP per capita offers the country many opportunities. The decentralised tax administration could be linked to a negative impact on the progress of digitisation because of structural disadvantages.

*Key words:* German tax administration, decentralised tax administration, digitalisation/digitisation, Digital European Society Index (DESI)

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## Introduction

Digitisation is taking place in all areas of public administration. Even the tax administration has reached a point where a real paradigm shift is needed (CIAT and IOTA 2018, 10). Many countries are already moving forward with exemplary digital solutions.

Using social networks, machine learning to interpret data/tax law, artificial intelligence, cognitive computing, blockchain technology, robotics, chat boxes to improve assessments and online portals are only some of the issues (Nazarov, Mikhaleva, and Chernousova 2019,

145). Digitisation is the key for a tax administration to accomplish its mission in the future. But it must be understood as a process of change and not as a product that can simply be bought. This so-called digital transformation will reduce operation times and costs, and even more so improve the risk management and audit's efficiency (Microsoft and PwC 2017, 9).

This paper attempts to analyse whether a decentralised tax administration has a negative impact on the degree of digitisation. For this purpose, an analysis of Digital European Society Index (DESI) alone with reference to a five-step model for the digitisation of tax administrations in Europe is carried out. It is assumed that the DESI does not reflect the performance of the countries and therefore provides less meaningful results for the study. As part of a quantitative analysis, the adapted DESI value (a-DESI) is to be linked to the per capita income in order to be able to determine whether explicit conclusions can be drawn about the disadvantages of a decentralised structure and can be presented graphically more obviously.

## Historical Background for Germany

The German tax administration has had various forms in its history. Until 1919, i.e. after the First World War, the administration was decentrally organised and the collection and administration of taxes was largely left to each federal state within its territory (Langenberg 1948, 13). From 1919 until the end of the Second World War the tax administration was centralised. All power and competences were transferred to the Weimar Republic/German Reich. During the National Socialism, this central administration played a decisive role in the plundering and expropriation of the jews (Friedensberger, Gössel, and Schönknecht 2002, 11).

Until the foundation of the Federal Republic of Germany, the Western Allies exported their respective tax administration systems to the occupation zones (Senger 2009, 38–41) and the country was divided into a mix of centralised and decentralised tax administrations. American and British administrators wanted a unified tax administration, but the French administration wanted to maintain a decentralised one, a further weakening of Germany (Senger 2009, 42).

Although the Parliamentary Council in 1949 had envisaged a central tax administration for the adoption of the German Basic Law, the Allies rejected this at the last minute (Senger 2009, 47). To date, the decentralised and shared tax administration for the Federal Republic of Germany is laid down in Article 108 of the Basic Law. The states remain the holders of state authority, but it is possible to change the

structure of the tax administration despite the principle of eternity in Article 79 III and Article 30 of the Basic Law (Perschau 1998, 2). However, over the last 70 years Article 108 of the Basic Law has only been slightly amended.

## Structural Differences

The differences in the structure of tax administrations have already been discussed extensively in the literature.

There are four typical categories for tax administration (Martinez-Vazquez and Timofeev 2005, 4):

1. single centralised tax authority;
2. independent tax authorities at different levels of government;
3. mixed models of tax administration;
4. fully decentralised tax authorities.

However, the distinction can be limited and simplified to two groups:

1. *centralised forms* – one autonomous tax administration unit with possible subdivisions (category 1);
2. *decentralised forms* – several autonomous tax administration units with possible subdivisions (category 2–4).

### CENTRALISED TAX ADMINISTRATION

A single centralised tax authority bundles responsibility for the administration and enforcement of all taxes on a state level. Offices exist mostly at a regional and local level (Vehorn and Ahmad 1997, 112). Digitisation could especially benefit from the following advantages: uniform organisational structure, clear distribution of competencies, uniform procedures and data processing, uniform training courses and workflows (Senger 2009, 102). Senger (2009, 102), however, still assumes the disadvantage of a lower innovative ability. But Martinez-Vazquez and Timofeev (2005, 5–6) see in a centralised tax administration a greater specialisation of personnel and an optimised use of resources by economies of scale, especially with regard to the use of computer technology and IT-experts.

### DECENTRALISED TAX ADMINISTRATION

The forms of decentralised tax administrations have in common that taxes and tax law competencies are divided. The fact that every level of government can levy taxes might also be regarded as a characteristic. In Germany for example all taxes are collected by the states for

the central goverment and for their own. Senger (2009, 102) sees the advantages of greater flexibility in administration and more freedom to follow local preferences. He highlights the disadvantages resulting from a possible loss of effectiveness due to a lack of cooperation between the authorities and the different procedures, laws and forms for taxpayers (Senger 2009, 102). With regard to digitisation, there are usually many contacts that have to be brought around the table in order to implement projects. In addition, the OECD found that the overall administrative costs of tax administration are higher (OECD 2006, 107).

## European Context of Tax Administrations

In general, it can be said that almost all countries in the European Union (EU 28) have a central tax administration. This may be due to the fact that the constitutions prescribe a unitary state structure and do not have any federalist aspects. For example, the UK, France, Italy and Spain of the largest economies in the EU have opted for centralised tax administration.

Germany with its 16 federal states plays an outsider role in the EU. Because even among countries with a federal state structure, countries such as Austria and Belgium have opted for the central tax administration model. Other forms of decentralised tax administrations in Europe can only be found in Switzerland, Bosnia and Herzegovina and in Russia. Prominent examples outside of Europe are the USA and Canada.

## Digitisation of Tax Administrations

### FIVE-STEP MODEL FOR THE DIGITISATION OF TAX ADMINISTRATIONS IN EUROPE

The literature has so far dealt little with the measurement of digitisation in tax administrations. Nevertheless, one paper by Vuković (2018) also comes back to a model of Ernst & Young Global Limited (2017, 1) refering to different degrees of digitisation. Based on this we can derive the following five-step model (table 1) and assign the countries in Europe.

Except Russia, countries in Europe having a decentralised tax administration (bold marked) are not playing a leading role in digitisation. Austria and Belgium, which despite their federal structure, have organised the tax administration centrally, are only on the same level as Germany. In the other European countries with central tax administrations, the classification in the categories does not show a

TABLE 1 Five-Step Model for the Digitisation of Tax Administrations in Europe

| (1) E-file (stardardised electronic forms) | (2) E-accounting (data in defined electronic format) | (3) E-match (additional and source data, government access + data match) | (4) E-audit (cross-checks, electronic audit assessments) | (5) E-assess (no need for tax forms, automatic assess) |
|---|---|---|---|---|
| Albania, Bosnia & Herzegovina, Croatia, Macedonia, Montenegro, Netherlands, Serbia, Slovenia, Sweden, Switzerland, Ukraine | Austria, Belgium, Finland, Germany, Greece, Italy, Lithuania, Luxembourg, Norway, United Kingdom | Czech Republic, Denmark, France, Hungary, Ireland, Poland, Portugal, Slovakia, Turkey | Russia | Spain |

NOTES Adapted from Ernst & Young Global Limited (2017).

clear trend. In a more detailed future investigation, further factors such as the income per capita of each country would have to be used for the analysis.

However, the OECD tries to set certain standards and requirements and the countries in Europe also implement these. Design and implementation then show differences at national level (Bailey 2019). This leads us to the question of what other determinants can play a role in the digital strategy and whether the influence of the decentralised tax administration can be proven otherwise.

According to Vuković (2018), the digitisation of tax administration comprises five elements: technologies, people, managing of tax risks, financial resources, and communication. The OECD (2017, 29–31) sees emerging challenges for tax administration in the following areas:

- global connectivity including cross-border processes,
- technology (paying, filing and enquiry),
- integrated and collaborated access (wider range of data, advanced analytics and risk assessment techniques, open dialog),
- effective data access (pre-filled options, interaction services with government, incorporation of tax requirements),
- better informed compliance management,
- cultural change within the workforce.

TABLE 2 Main Indicators for Digital Public Services of DESI

| | | |
|---|---|---|
| 5a1 | e-Government users | Percentage of internet users needing to submit forms |
| 5a2 | Pre-filled forms | Score (0 to 100) |
| 5a3 | Online service completion | Score (0 to 100) |
| 5a4 | Digital public services for business | Score (0 to 100) – including domestic and cross-border |
| 5a5 | Open data | Percentage of maximum score |

NOTES Adapted from European Commission (2020).

### DIGITAL ECONOMY AND SOCIETY INDEX (DESI)

By the Digital Economy and Society Index (DESI) the European Commission summrises relevant indicators on Europe's digital performance and tracks the evolution of EU member States in digital competitiveness. Besides there is also an International Digital Economy and Society Index (I-DESI) for international purposes, but it is not updated annually and provides less detailed sub-categories. Both index variants have topic-related chapters, for example on analyses of broadband connectivity, digital skills, internet use, digitisation of the economy, digital public services, future technologies and cyber security. To analyse the influence of a decentralised tax administration in a European context, we have to compare Germany with the rest of the European Union by using the DESI. One chapter examines the requirements and expectations of the public sector, taking into account the supply and demand side of digital public services and open data. The values given there apply to public administration as a whole. In order to be able to draw conclusions about the tax administration, an adjustment of the index is possible, as explained below. We have to concentrate on the key performance indicators in this matter and analyse the performances of the countries. The main indicators in the chapter 'Digital Public Services' of the DESI are presented in table 2.

Indicator 5a1 shows the percentage of users who submitted forms to the public administration. This quota must be constantly expanded in the course of digitisation as it is the basis for digital data instead of analog data. Also, extremely important for the promotion of digitisation is the second indicator 5a2. The administrative authorities already have a lot of their citizens' data, such as sensitive tax data. In this way it is possible to offer pre-filled declarations and documents so that citizens do not have to re-enter the data. Indicators 5a1 and 5a2 can be seen as a necessity for the first and second step for the before shown five-step model for the digitisation in Eu-

rope (E-file/E-accounting). In the case of indicator 5a3, the extent to which public administration services can be concluded completely online is examined. It can be assumed that the willingness to participate in digital administration services will increase if everything can be done online. If this is only partially possible, citizens may switch completely to the analog path, as a result of which digital data for all further processes (e.g. real-time audits/e-assess) will be missing. For starting a business or conducting regular business operations, the indicator 5a4 stands for the availability of online and cross-border services. Since multinational tax issues are increasing, even with smaller companies, this aspect is just as important for the digitisation of tax administration. If services for companies are lacking here, the digitisation steps III–V (E-match, E-audit, E-assess) of the five-step model in particular cannot be achieved.

The composite index (DESI) in its basic composition of the Digital Public Services sector shows Germany in the bottom third of all EU 28 countries (European Commission 2020). We have to consider, that this basic composition cannot be explicitly applied to the tax administration but only to public services in general. Nevertheless, as seen above, with the categories 5a1 and 5a4 the index DESI covers the essential determinants that can be seen as a prerequisite for the digitisation of tax administration. Only the indicator 5a5 'Open data' cannot be used for the analysis and must be removed from the DESI. The reason is that the data in the tax administration is sensitive data that is usually protected by law or data protection law. Their availability will therefore always be more limited than general data. To avoid distortions here, we have to remove category 5a5 and will finally form the mean of the other categories. In the following, therefore an adapted DESI (a-DESI) will be used.

### Adapted Digital Economy and Society Index (a-DESI)

#### DATA COLLECTION

For the analysis using the a-DESI the single category values of the composite DESI 2020 for the year 2019 were used (European Commission 2020). The gross domestic product (GDP) per capita figures are based on current data for the year 2019 (The World Bank 2020). All used abbreviations, components and details are listed in table 3 and table 4.

#### FINDINGS USING THE A-DESI AND GDP PER CAPITA

First of all, the comparison of the GDP per capita in 2019 (constant 2010 US$) in the respective countries with the a-DESI value leads to

TABLE 3 Tax Administrations in the European Union

| Country | Abbr. | Tax administration | cen/decen |
|---|---|---|---|
| Austria | AT | Bundesministerium für Finanzen | cen |
| Belgium | BE | Federal Public Service Finance | cen |
| Bulgaria | BG | Natsionalna agentsia za prihodite na Republika Bulgaria | cen |
| Croatia | HR | Ministarstvo financija Republike Hrvatske | cen |
| Cyprus | CY | Cyprus Tax Department – Tmíma Forologías | cen |
| Czech Republic | CR | Finanční správa České republiky | cen |
| Denmark | DK | Skattestyrelsen | cen |
| Estonia | EE | Maksu-ja Tolliamet | cen |
| Finland | FI | Vero Skatt – Tax Authority | cen |
| France | FR | Direction Générale des Finances Publiques | cen |
| Germany | DE | Finanzverwaltungen der Bundesländer | decen |
| Greece | EL | Anexártītī Archí Dīmosíon Esódon | cen |
| Hungary | HU | Nemzeti Adó és Vámhivatal | cen |
| Ireland | IE | Office of the Revenue Commissioners – Oifig na gCoimisinéirí Ioncaim | cen |
| Italy | IT | Agenzia delle Entrate | cen |
| Latvia | LV | Valsts ienēmumu dienests | cen |
| Lithuania | LT | Valstybinė mokesčių inspekcija prie Lietuvos Respublikos finansų ministerijos | cen |
| Luxembourg | LU | Administration de l´Enregistrement, des Domaines et de la TVA | cen |
| Malta | MT | Office of the Commissioner for Revenue | cen |
| Netherlands | NL | Belastingdienst | cen |
| Poland | PL | Krajowa Administracja Skarbowa | cen |
| Portugal | PT | Autoridade Tributária e Aduaneira | cen |
| Romania | RO | Agenţia Naţională de Administrare Fiscală | cen |
| Slovakia | SK | Finančná správa Slovenskej republiky | cen |
| Slovenia | SI | Finančna uprava Republike Slovenije | cen |
| Spain | ES | Agencia Estatal de Administración Tributaria | cen |
| Sweden | SE | Skatteverket | cen |
| United Kingdom | UK | Her Majesty's Revenue & Customs | cen |

the results shown in figure 1. The GDP per capita is mainly used to compare the economic situation of different countries. At this point, it is intended to serve as an indicator of the prosperity in the respective country and the possibility to invest, especially in digital technology.

The dotted line indicates the EU average. It is the ratio of GDP per capita and a-DESI. The further away from the EU average, the better

TABLE 4 Data Set

| Country | 5a1 | 5a2 | 5a3 | 5a4 | (1) | (2) | (3) | (4) |
|---|---|---|---|---|---|---|---|---|
| AT | 70.0 | 81.4 | 97 | 93.1 | 85.5 | 50.655 | 153.8 | 735.8 |
| BE | 52.9 | 70.1 | 88 | 93 | 76.0 | 47.541 | −253.8 | 1143.4 |
| BG | 60.9 | 34.1 | 79 | 92.6 | 66.8 | 9.026 | 589.4 | 300.1 |
| HR | 65.3 | 33.1 | 73 | 65.3 | 59.2 | 16.455 | 217.4 | 672.2 |
| CY | 50.9 | 60.0 | 79 | 91.1 | 70.2 | 32.093 | −66.0 | 955.6 |
| CZ | 50.8 | 52.5 | 82 | 79.8 | 66.3 | 23.834 | 86.4 | 803.2 |
| DK | 91.2 | 68.9 | 99 | 100 | 89.7 | 65.147 | 216.9 | 672.6 |
| EE | 93.1 | 89.6 | 98 | 100 | 95.2 | 20.742 | 789.0 | 100.6 |
| FI | 94.4 | 81.9 | 96 | 92.1 | 91.1 | 49.241 | 448.9 | 440.7 |
| FR | 76.2 | 39.8 | 93 | 92.6 | 75.3 | 44.317 | −205.1 | 1094.6 |
| DE | 49.3 | 41.1 | 90 | 92.1 | 68.1 | 47.628 | −631.0 | 1520.5 |
| EL | 39.1 | 24.5 | 84 | 63.1 | 52.8 | 24.024 | −245.6 | 1135.1 |
| HU | 55.2 | 41.8 | 87 | 85.3 | 67.3 | 17.466 | 318.0 | 571.6 |
| IE | 76.4 | 57.1 | 88 | 99 | 80.1 | 79.703 | −694.5 | 1584.1 |
| IT | 32.3 | 48.3 | 92 | 94.5 | 66.9 | 35.614 | −291.0 | 1180.6 |
| LV | 83.1 | 85.6 | 96 | 90.2 | 88.8 | 16.698 | 703.0 | 186.6 |
| LT | 80.9 | 88.3 | 96 | 93.2 | 89.6 | 18.427 | 698.4 | 191.2 |
| LU | 57.8 | 66.5 | 90 | 99 | 78.2 | 111.062 | −1528.8 | 2418.4 |
| MT | 56.8 | 100.0 | 100 | 93.8 | 87.7 | 28.943 | 532.1 | 357.4 |
| NL | 85.9 | 77.5 | 90 | 84.5 | 84.4 | 55.690 | 19.4 | 870.2 |
| PL | 54.2 | 58.0 | 87 | 75.4 | 68.6 | 17.387 | 343.6 | 545.9 |
| PT | 69.8 | 81.9 | 99 | 87.5 | 84.5 | 24.590 | 507.2 | 382.4 |
| RO | 82.2 | 10.4 | 70 | 53.3 | 54.1 | 12.131 | 332.1 | 557.4 |
| SK | 52.2 | 37.6 | 85 | 84.1 | 64.7 | 21.039 | 147.4 | 742.2 |
| SI | 58.6 | 64.0 | 91 | 76.7 | 72.7 | 27.152 | 147.0 | 742.6 |
| ES | 81.9 | 80.3 | 96 | 93.2 | 87.8 | 33.350 | 482.7 | 406.9 |
| SE | 89.3 | 75.6 | 92 | 92.4 | 87.3 | 57.975 | 151.8 | 737.7 |
| UK | 88.5 | 20.9 | 93 | 97.2 | 74.8 | 43.688 | −211.4 | 1100.9 |
| EU | 67.3 | 59.4 | 90 | 87.6 | 76.0 | 37.104 | 0.0 | 889.6 |

NOTES Column geadings are as follows: (1) a-DESI 2020 (mean), (2) GDP per capita 2019 ($), (3) RDE, (4) area.

or worse the degree of digitisation. Ireland and Luxembourg must be neglected in the consideration, because the GDP per capita stands out extremely. Possibly this can be connected with a low corporate tax policy, the large multinational corporations and the small population. However, we can see that the countries in the EU can be divided into two groups. Countries where there is a lack of digitisation are within the area outlined in red. Among them we find Germany, Belgium, the United Kingdom, France and Italy. Countries that are at the

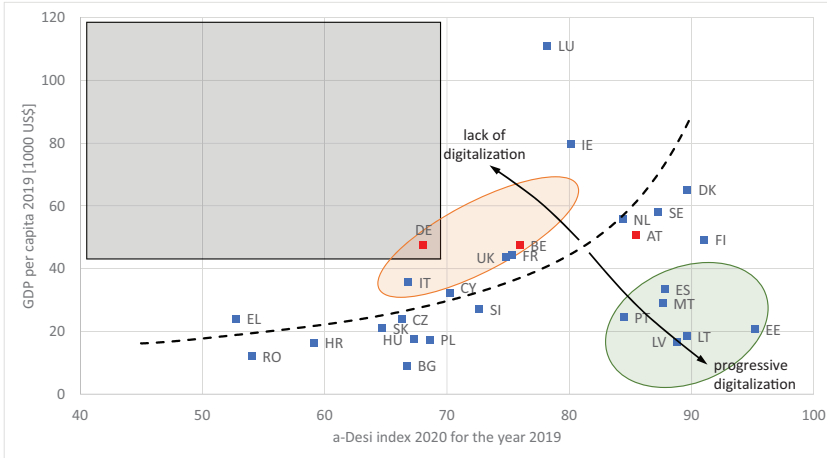


FIGURE 1 Clustering of Countries Based on the Course of the EU

forefront of digitisation are in the green-bordered area. Finland with similar GDP per capita and e.g. Spain, Estonia, Latvia and Lithuania with lower GDP per capita can be regarded as leading countries in digitisation.

The black square illustrates that there is no country in the European Union that has a comparable high per capita income and a poorer level of digitisation (a-DESI). There is no country in the EU with a comparably GDP per capita and the same low a-DESI value. Countries with the same GDP per capita have a much higher a-DESI value, such as France, Belgium, Austria or Finland. Furthermore, all countries with a similar a-DESI index have a lower GDP per capita. However, Belgium and Austria (highlighted also in red), despite their federal structure, have a better rating with their similar GDP per capita. They have a central tax administration.

In figure 2, a graphical analysis is performed. Normally, the surfaces are applied in direction 0. In the case of the digitisation index, the areas are plotted in direction 100, because the closer a country is to 100, the better it's position. The area is an indicator here, namely the product of GDP per capita and the a-DESI value. It shows how much money is available in the countries and how well digitisation is being implemented. The more prosperous a state is, the more it would have to invest in digitisation. The dotted EU curve describes a balanced ratio between GDP per capita and investment in the tax digitisation progress. Each point on that curve creates an identically sized area. As an example, three areas for a low, a medium, and a high a-DESI are shown. All areas have the same size. How-

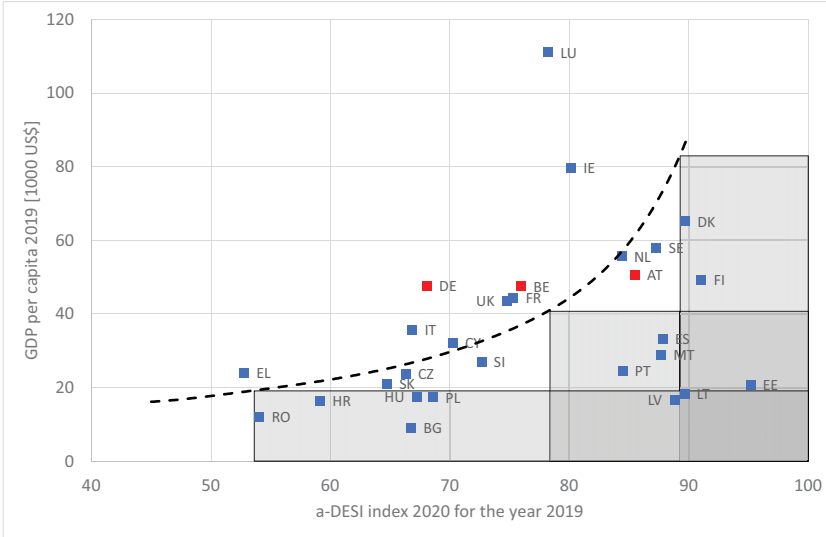


FIGURE 2 Example Areas as a Product of GDP and a-DESI

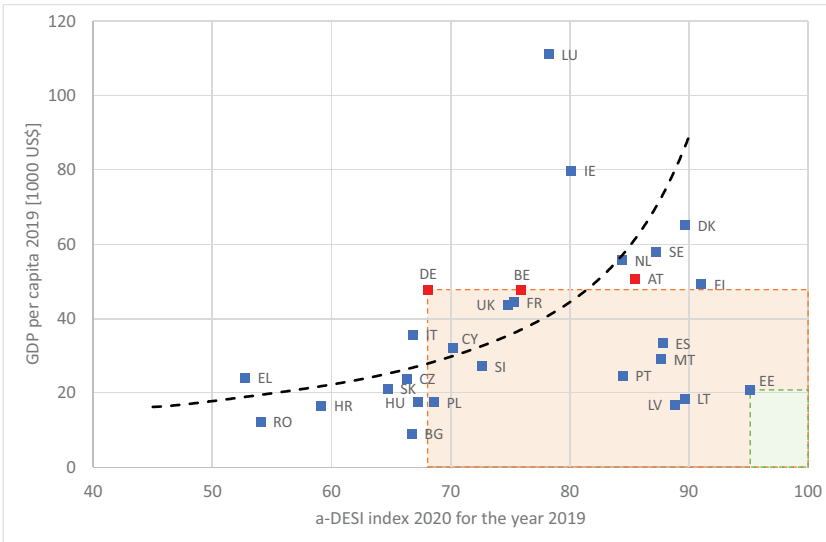


FIGURE 3 Comparison of the Areas of Germany and Estonia

ever, the smaller an area is, the better will be the Relative Digitisation Efficiency (RDE), explained and shown later. Based on this exemplary representation, the respective areas can be determined for each country. Figure 3 shows the areas for Germany (red) and Estonia (green). Germany has the largest area of the EU, excluding

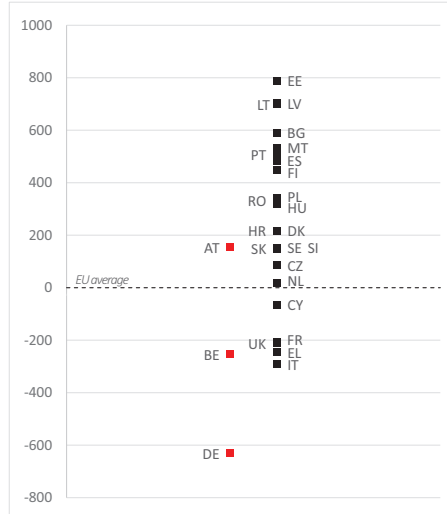


FIGURE 4

RDE – Relative Digitization Efficiency

the special cases Luxembourg and Ireland. The financial resources at Germany's disposal are not invested in digitisation in a balanced ratio. In the case of Estonia, the area shown is the smallest in the EU and the country is investing relatively substantially in digitisation despite its rather limited financial resources.

In order to get an overview of all countries of the EU, all calculated areas can be compared. Luxembourg and Ireland are excluded as mentioned before. The representation is done as a Relative Digitisation Efficiency (RDE) in figure 4 in relation to the EU average. This is set as 0-point and the differences are displayed accordingly. Negative values mean that a country is worse than the EU average. Positive values mean that a country is better than the EU average. This form of presentation also makes it very clear that Germany has a substantial need for investment in digitisation in the context of tax administration.

## Conclusion

The five-step model only led to unclear statements about the position in digitisation. However, from the DESI an adaptation to an a-DESI related to tax administration was successfully implemented. By looking at the adapted DESI it could be shown that Germany has the worst position within the EU 28 states (excluding Luxembourg and Ireland). We have to assume that a country with such a high per capita income should be better represented in terms of digitisation in the tax administration. Based on the consideration according to

the adapted DESI it becomes clear that Germany could have structural disadvantages compared to the remaining 27 EU countries. One difference of Germany to all other EU countries is its decentralised tax administration.

Further research must be conducted to determine whether a decentralised tax administration might have a negative impact on its degree of digitisation. As soon as a current I-DESI is available, the investigation carried out here should be extended to see if the trend can be confirmed by other countries with decentralised tax administrations.

A position paper of the Federal Ministry of Finance in 2004 had already determined that the 16 independent tax administrations lead to considerable disadvantages for Germany (Bundesministerium der Finanzen 2004, 1–3). Some of the disadvantages assumed there can have an adverse effect on digital transformation. In their counter-assessment, the finance ministers of the federal states claim that it is not federalism in the tax administration, but German tax law that is causing the disadvantages (Finanzministerkonferenz 2004, 4). This should be part of a further research.

## Discussion

Data on the digitization of the tax administration of the individual federal states of Germany are not available or only sparse. This paper attempts to address this issue by using an adapted DESI, a more meaningful representation can be made, as assumed at the beginning. However, the informative value of the DESI for the tax administration is limited because the index only analyses the public administration in general and thus does not take into account any special features. Nevertheless, it could be shown that Germany performs worst in the case of the developed a-DESI. However, the extent to which this is exclusively due to the decentralised structure remains questionable. The organization of the tax administration in Germany is very complex, so that certainly no monocausality can be assumed and consequently limits the investigation. There are multiple factors that can influence the DESI value. But decentralisation seems to be a crucial contributing factor.

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# *Abstracts in Slovene*

## Program čezmejnega pospeševanja: primer Slovenije in Italije

*Tina Bratkovič Kregar in Mitja Ruzzier*

Start-upi in MSP-ji veljajo za ključne akterje v gospodarskem razvoju držav. To pomeni, da je treba vzpostaviti ekosistem, ki bo tem podjetjem omogočal razvoj in rast. Naš prispevek obravnava vlogo regionalnih inovacijskih ekosistemov v procesu razvoja in negovanja teh podjetij. V njem predvsem preučujemo vlogo čezmejnega sodelovanja pri vzpostavljanju regionalnega inovacijskega ekosistema, ki presega meje, in zagotavljamo dokaze o uspešnem čezmejnem sodelovanju med Italijo in Slovenijo. Na podlagi primarnega in sekundarnega zbiranja podatkov je bil razvit integriran model čezmejnega pospeševalnega programa. Naše ugotovitve imajo pomembne posledice za čezmejno sodelovanje na področju vzpostavitve čezmejnih pospeševalnih programov in predstavljajo primer najboljše prakse na tem področju. Pri prihodnjem razmisleku o podpori in spodbujanju inovacijskih ekosistemov bi moralo biti čezmejno sodelovanje bistvenega pomena za učinkovit prenos tehnologije in znanja iz raziskovalnih ustanov v podjetja.

*Ključne besede:* podjetništvo, inovacijski ekosistem, podjetje start-up, pospeševalnik, čezmejno sodelovanje
*Management* 15 (4): 241–264

## Zaposlovanje tujcev iz Bosne in Hercegovine ter Srbije v Sloveniji

*Katjuša Kostanjšek in Gregor Jagodič*

Zaradi pomanjkanja specifičnih poklicev na slovenskem trgu dela vse več slovenskih delodajalcev zaposluje tujce, ki prihajajo iz Bosne in Hercegovine ter Srbije. Naša raziskava je pokazala, da se pri zaposlovanju delodajalci najpogosteje srečujejo s pomanjkanjem ustreznih kandidatov na trgu dela in zapletenimi upravnimi postopki za zaposlovanje tujcev iz Bosne in Hercegovine in Srbije. Z namenom lažjega in hitrejšega vključevanja tujcev v delovno okolje podjetja ponujajo različne vrste pomoči, vendar se pogosto srečujejo z nepripravljenostjo tujcev po prilagoditvi novemu okolju. S preverjanjem hipotez in izpeljavo zaključkov podjetjem ponujamo predloge za olajšanje zaposlitvenih postopkov tujcev in njihovo hitrejše vključevanje v delovno in življenjsko okolje.

*Ključne besede:* trg dela, tuji delavci, zaposlitvene prakse, Bosna in Hercegovina, Srbija, vključevanje zaposlenih
*Management* 15 (4): 265–289

## Razmerje med splošnimi veščinami in zaposlitvenimi veščinami: raziskovalna študija v okviru novozelandskega podiplomskega izobraževanja

*Zhenfeng Zhao in Indrapriya Kularatne*

Problem, s katerim se soočajo novozelandski izvajalci terciarnega izobraževanja, je pomanjkanje diplomantov, pripravljenih na zaposlitev. Poleg univerz na trg dela večji delež zaposlenih, ki usposabljajo druge, prispevajo tudi inštituti za tehnologijo in politehniko (ITP). Cilj te študije je oceniti, kako splošna znanja in spretnosti, ki jih zagotavljajo ITP-ji, prispevajo k zaposlitvenim veščinam diplomantov. Z namenom raziskave najpomembnejših splošnih veščin za aktualni novozelandski trg dela je bil opravljen pregled literature. Pridobljeni in analizirani so bili podatki o treh skupinah udeležencev. Rezultati te raziskave omogočajo razumevanje, kako diplomanti med študijem v ITP uspešno pridobijo svoje splošne veščine, ugotovitve pa pojasnjujejo, kako le-te diplomanti pridobijo in izboljšajo. Rezultati kažejo, da večina diplomantov študij na ITP sicer začne z nekaterimi že usvojenimi splošnimi veščinami, vendar pa se vsi strinjajo, da študij na ITP te veščine še izboljša.

*Ključne besede:* splošne veščine, trde veščine, mehke veščine, zaposlitvene veščine, tematska analiza
*Management* 15 (4): 291–307

## Nemčija – položaj zadnje luči v digitalizaciji: analiza decentralizirane davčne uprave na podlagi indeksa digitalnega gospodarstva in družbe

*Daniel Simon Schaebs*

Prispevek opisuje zgodovinske razloge za decentralizirano davčno upravo v Nemčiji in primerja različne strukture. Poglobljena analiza indeksa digitalnega gospodarstva in družbe (DESI) s posebnim upoštevanjem petstopenjskega modela digitalizacije v Evropi in smernic OECD razkriva vedno slabši položaj Nemčije v evropskem okviru. DESI iz leta 2019 je bil prilagojen tako, da zajema bistvene dejavnike davčne uprave. Ta prilagojena vrednost DESI-ja (a-DESI) je bila povezana z bruto domačim proizvodom (BDP) na prebivalca za leto 2019, s čimer je bila vključena uspešnost držav. Za to poglobljeno analizo je bil razvit nov ključni kazalnik, relativna uspešnost digitalizacije (RDE), ki je razkril, da je Nemčija v tem procesu digitalizacije na dnu, čeprav BDP na prebivalca državi ponuja veliko priložnosti. Decentralizirano davčno upravo bi lahko povezali z negativnim vplivom na napredek digitalizacije zaradi strukturnih pomanjkljivosti.

*Ključne besede:* nemška davčna uprava, decentralizirana davčna uprava, digitalizacija/digitizacija, indeks digitalnega gospodarstva in družbe (DESI)
*Management* 15 (4): 309–323