SBS Journal of Applied Business Research

September 2015/16
Volume 4

swiss business school SBS

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The SBS-JABR is published once a year. Volume 5 will be issued in September 2017. Submissions are now being accepted for the 2017 issue. Submission deadline is 31 May 2017.

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ISSN SBS-JABR:

2235-7742 (print)
2235-7750 (online)

START-UPS in Latvia: A Pain or a Gain?

by

Bert Wolfs, PhD and Janis Lapels

Abstract

Latvia, a Baltic country, is ranked 27 in the World Bank Business Ranking (2016). If it needs to prosper, it needs to create an ecosystem to foster more citizens to start their own enterprise. The aim of the research is to analyze the importance of internal and external factors of start-up development in Latvia. The following hypothesis was tested: H(o): Internal Factors do not play a statistically significant role in the development of a start-up in Latvia. H(a): Internal and External factors do play a statistically significant role in the development of a start-up in Latvia.

Keywords: Latvia, Start-ups, Funding

Introduction

What is a start-up? Nowadays, the term start-up is understood as either a procedure before the company performs its economic activities (European Commission) or a "gazelle", which is a subset of a high-growth enterprise (OECD, 2015). Lowe and Marriott (2007) define a start-up as a synonym to new venture creation. Its strategy is focused on three dimensions –the business environment, the resources of the organization, and the values of the organization. Wickham (2006) describes a start-up as a process of moving from the conventional labor pool to the entrepreneurial pool. The reverse process is called a fall-out. According to the Ministry of Economics of the Republic of Latvia (2015), a start-up is a newly established small business. Eric Ries, the author of the book *The Lean Startup,* suggests that a start-up is an organization dedicated to creating something new under conditions of extreme uncertainty. In the literature, there is no common definition of a start-up. The authors collected different views and concluded that scalability is one major condition for success. Following the views of Kim, Gross, Demers and Bennet (2016), here is a summary of the most common factors that influence the performance of a start-up: Summary of most common factors that influence the performance of a start-up (Table 1, below).

Table 1.

INTERNAL	EXTERNAL
1) Product idea	1) Market demand for the product
2) Team management/leadership	2) Financing
3) Planning	3) Competition
4) Marketing	4) Legal and political environment
5) Customer relationship management (CRM)	5) Timing

Internal factors are categorized as factors that are controlled by the team in the business, whereas external factors are factors that influence the development of start-ups more from the external sources, such as government rules and regulations, customers, creditors/financiers.

From a leadership perspective, the authors found the work from Rodríguez-Sánchez and Perea (2015) the most compelling. They state that transformational leadership and teamwork are important factors to improve team resilience and the success of the organization. According to the authors, "the role of leadership has been emphasized in creating a culture of innovation and proactivity responsible of resilience culture in organizations. Thus, according to our behavioral approach, the leadership style closer to the idea of proactivity and innovation is transformational leadership." As mentioned before, start-ups are in their core innovative and pro-active companies, therefore these factors are having a strong correlation between the success of a start-up and team management/leadership.

Furthermore, marketing is an important tool in start-ups and in every business because it is the tool, with which the business communicates with the client. For each type of client, business, or consumer, the tools differ. Neil Patel mentions these five important marketing tools for an online start-up (Patel, 2014):

1) Superb web design – the design of the website must tell a story and it has to communicate with the client and find what he or she needs.

2) To be social everywhere – a start-up should communicate with its clientele through social networks, such as Facebook, Twitter and also through other networks, such as AngelList, MidsizeInsider, and others.

3) A large amount of content – content means that a business has passion and that it has something to say.

4) Fast response to emails and social inquiries – it plays an important role together with customer relationship management because if the business doesn't respond to the customer, it can negatively affect the brand value and reputation.

Personal branding – before start-up founders advertise their business, it should advertise its people, its team.

The final aspect is financing. Atherton (2012) analyzed 20 start-ups and found the following most common financing types: a)formal equity (venture capital investments), b)formal loans, c) informal investments (Friends, Family, Fools), d) overdraft, e) HPLF (hire, purchase, leasing, factoring), f) grants from local authorities.

To conclude this section, the authors looked at the work of Gross (2014), cofounder of PIMCO. He analyzed multiple start-ups and how much different factors such as ideas, business model, funding, and timing influenced their success. Gross concluded that timing is everything.

The start-up environment in Latvia

The authors looked at the Innovation Union Scorecard (IUS), used by the European Commission (EC) to improve the research activities in each EU Member state. The IUS distinguishes three main types of indicators-outputs, enablers, and firm activities. The Table 2 summarizes the type of indicators and their dimensions.

Table 2. IUS dimensions

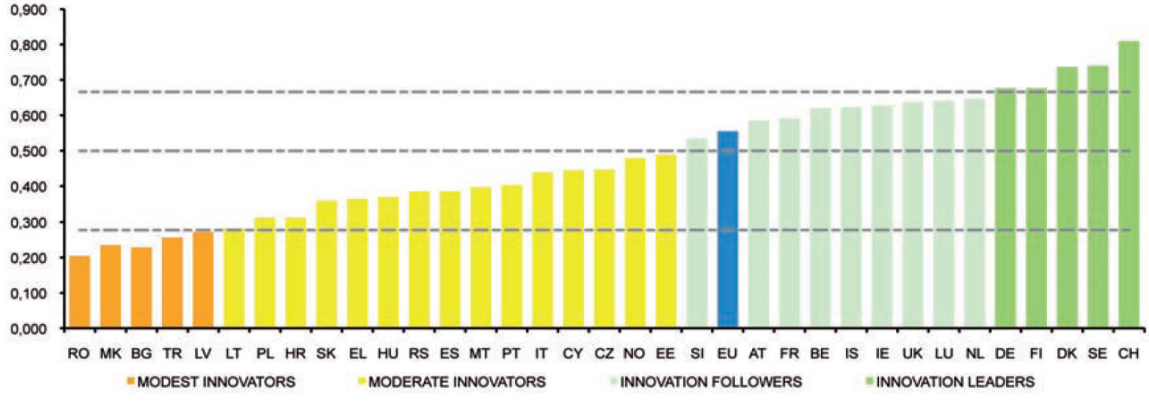
Enablers	Firm activities	Outputs
Human resources	Firm investments	Innovators
Open, excellent and attractive research systems	Linkages & entrepreneurship	Economic effects
Finance and support	Intellectual assets	

Source: Developed by the Authors based on Innovation Union Scoreboard 2015

The enablers are the main external drivers to the firm of innovation performance, such as human resources, which measures the availability of highly educated and skilled workforce, research systems, which measures the international competitiveness of the science base and finance and support, which evaluates the availability of finance from venture capital investments and governmental support in R&D expenditures. Firm activities are the efforts made by firms in innovation, such as investments in R&D and non-R&D, MSMEs that innovate in-house, a collaboration of research between the private and public sector and evaluating the different forms of intellectual property rights. Lastly, outputs evaluate how the innovation activities performed by firms affect the market.

Table 3. The graph below presents the scores for each European state in 2015

The graph indicates that the European average score is approximately 0.55 and 15% are innovation leaders; these are Switzerland, Sweden, Denmark, Finland, and Germany. Furthermore, 26% are innovation followers, 44% are moderate innovators and the remaining 15% are modest innovators, which are Romania, Macedonia, Bulgaria, Turkey, and Latvia. Although Latvia is evaluated as a modest innovator (0.27), it had one of the highest growth rates in the European Union, alongside Bulgaria and Malta, which is mostly because of a very strong increase in non-R&D innovation expenditures. Moreover, Latvia had an improvement in sales of the new-to-firm and new-to-market innovations from 2014, but there was a decline in scientific publications and R&D expenditure in the public sector. Latvia can increase its scientific specialization index (further in the text – SI) and impact on a world level by improving the knowledge base for bio-economics, biotechnology, and others.



European state innovation performance in 2015

Source: Innovation Scoreboard Report 2015

In comparison to Lithuania and Estonia, Latvia has a better SI index for biotechnology, but it has a smaller impact on the world level.

Latvia has comparatively small R&D expenditures per capita – only 81.3 Euros, whereas Lithuania and Estonia have 125.6 Euros and 217.9 Euros per capita respectively. According to the Macro Research report for 2014 performed by Swedbank Latvija, the main reason for this is that there are high innovation costs and there is high lack of funds. In order to improve the situation in Latvia, the government should increase expenditure in growth-related areas, such as education and R&D.

Latvia's biggest trading partner is the EU. On average the total amount of trade is 62% with EU countries, whereas the remaining 38% is with other world countries. In 2014 the amount of total trade was 1.1 billion Euros, whereas 74% or 780 million Euros was with EU countries. This can be partly explained due to the introduction of the euro in 2014 and therefore it was cheaper for companies to trade with other Eurozone member states. The increase was by 160 million Euros from 2013 or by 26%. The most significant increase in extra EU-28 states was in 2011 when the total trade amount increased by 200 million Euros or by 160%.

Survey Results

The authors developed a 10-question survey and sent it out to 200 start-up founders in Latvia, from February till April 2016. Key findings:

-Age: 35% of the respondents (the largest group) are in the 23-27 years age group,

-Gender: 19% female, 81% male

-Education: 20% obtained a high school diploma, 41% obtained a bachelor's degree, 25% a master's degree, 14 % other forms of education.

-Funds: 70% used their own money to finance the start-up and 30% were willing to consider crowdfunding as a form of financing.

-Industry: 47% consider that the finance, payment, and e-commerce industry have the highest growth potential in Latvia.

Table 4 below contains parameters, which are required to perform the z-test. Z-test is "a technique used to test the hypothesis that proportions are significantly different for two independent samples or groups" (Babin & Griffin, 2013).

Table 4. Z-test parameters and testing

Sample mean	51%
Standard Deviation	3%
SE of mean	0.0045
Z-statistic	2.02
Precision	5%
Rejection z-scores	From -1.96 to 1.96
Conclusion	Reject the Null hypothesis (Ho)

Source: Developed by the Author using survey data

Based on our calculation, the null hypothesis is rejected, which means that the importance of internal factors in start-up development is not less than or equal to 50%, therefore the alternative hypothesis has been approved.

Conclusion

The study looked at the start-up environment in Latvia.

1. Reviewing the different meanings of start-up, it is clear that there are major differences between opinions of what a start-up is. One definition is that it is a phase for a company where it searches for funding, develops the business model, and prepares to enter the market, while the other states that it is a gazelle, a small high-growth young company with the potential growth of 20% per annum for five years focusing on technological products.

2. Start-ups that are considered as high-growth enterprises develop through 3 stages: the pre-startup, startup, and growth, where the main tasks during the pre-startup phase are defining the vision and mission, afterward in the startup phase develop the minimum viable product, and finding its market fit and in growth stage performs scaling.

3. Eric Ries, the author of *The Lean Startup,* has developed a method that helps build the product faster and helps start-ups improve. The method consists of three parts: generating the idea and building it faster, coding the product and measuring it through different tests, and collecting the data from the product, and learning the fields where to improve it.

4.

5. Researchers have various opinions about which type of factors influence start-up development mostly. Some researchers state that team resilience and adaptability is the secret to the success of an organization, while others state that timing in the market or planning is the most crucial factors.

6. There are different types of venture and start-up funding. Most common are business angels who provide knowledge and capital, venture capital companies who are needed for expansion into new markets, crowdfunding that is an investment from the public through the internet and founder's own funds, savings from previous ventures.

7. Latvia, according to European Commission's Innovation Union Scoreboard, was considered a modest innovator, which was one of the worst results in Europe, due to lack of attractiveness in research systems, public-private co-publications, and insignificant revenues from license and patents abroad.

8. The strengths of Latvia are relatively high non-R&D expenses in innovation, which are for investments in machinery, patents, and licenses, and the number of youth and population with secondary and tertiary education.

9. According to Innovation Union's progress report, Latvia is scientifically specialized in materials and biotechnology, while the impact on the world

level is more from health and food, agriculture & fisheries fields.

10. In comparison to EU countries, Latvia has low R&D expenditure per capita – only 81.3 Euros. The largest part of this is in the higher education sector and only 35% in the business enterprise sector.

11. Largest part of the survey sample (66%) had acquired either a bachelor's degree or a master's degree. Together with the information that 57% of the survey sample were in age from 23 to 32 years, proved that a large part of people who finish their academic studies build their own start-up or are working in one.

12. Surveyed sample evaluated that internal factors have larger importance in the development of a start-up with an average score of 4.0, whereas external factors had a score of 3.9 points. On the other hand, the demand for the product had the biggest score of 4.6 points, which is an external factor.

13. As a source of financing 70% would use their own money to finance the start-up, whereas only 35% would use crowdfunding websites. This is partly explained that more people are willing to stay independent and keep their company secret from additional competition.

14. According to specialist interviews, the largest differences between start-ups and MSMEs are that start-ups are scalable, innovative, high-growth enterprises, whereas MSMEs usually provide a product that is already in the market and does not have the potential of high growth.

15. When asked about what are the most important factors that influence start-up development, all experts mentioned that it is a set of factors and that it depends on the current goal. If it is getting funding from a business angel or a venture capital it is the team and belief in the idea, for others, it is the right timing and the geographical location.

16. The meaning of a successful start-up, for each expert was different. For some it was the exit of the start-up by selling its business to a large, international corporation, for others it was building added value and developing further with the original team, not pushing for the exit.

17. Overall, the authors conclude that internal factors are more important in start-up development than external factors, therefore proving the Alterna-

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A Study on the Performance of Latvian Bank in their Digitalization

by

By Sudhindra Bhat, PhD and A. Raschellà

Abstract

The financial service sectors create major impact in the world economy. Digitalization is remarkably changing business worldwide. In this study the performance of Latvian Bank in their digitalization was investigated. The research findings indicate that gender does not play a significant role with respect to ability to use digitalization devices while making banking transactions. Further it revealed that significant difference is there for the customer visit of bank branch and transfer of money and withdrawal of money. It also shows that there is a significant relationship between ability to use the digitalization devices for banking transactions and opinion about mobile banking menu on phone.

Key Words: Digitalization, Latvian Bank, Financial service sector, Transfer of money, Withdrawal of money, Banking transactions

Introduction

The financial service sectors create major impact in the world economy. The financial institutions that comprise an economy's financial system represent the brain of the economy assuring the majority of the economy's requisites for many operations. The banking industry represents the predominant part of financial services (Fasnacht, 2009). Today's highly competitive market place, characterized by global economic integration into volatile business environments, shorter product and innovation lifecycles, rapid growth of information technologies and electronic communication, puts pressure on banks to continuously evolve, by changing their competitive dynamics and strategic context (Achrol, 1991). Business worldwide is rapidly digitizing, breaking down industry boundaries, building new opportunities, and at the same time accelerating the challenges while harming long successful business models. This is called digital disruption – a phenomenon that will substantially shape banking industry and its operations in years to come (Weill & Woerner, 2015). The age of digital disruption requires businesses to swiftly and smoothly change business and its processes beyond the standard level of flexibility to efficiently and effectively carry out unpredictable external and internal changes (Van Oosterhout et al., 2006).

Latvia is a small, open economy and the local financial sector serves mainly a local demand for limited global financial market services. The Latvian banking sector is split into two segments: domestic-centered banks, where Scandinavian banks and their branches have a dominant role, and banks which are focusing mainly on servicing non-residents while having no close links with the domestic economy (FCMC, 2015). Latvia has been a part of the European Union since 2004. During the period from 2005 till 2007, there was a 50 percent annual growth in loans which contributed to the increase in banking

income and profitability, with Return on Equity (ROE) reaching 25.5 percent on average. In the aftermath of the financial crisis, the banking sector suffered significant losses from 2009 to 2011 due to the significant need for loan provisions. According to FCMC (February, 2016), the banking sector earned 416 million Euro in profits (compared to 311 million in 2014). The 15 Latvian banks and the five foreign banks' branches in Latvia made 426.9 million Euro in profit in 2015. The ROE reached 12.5 % in 2015, an increase of 1.4 % compared to 2014. The structure of the banks income and expenditures has been stable. The growth comes from higher net operating income and the shrinking loan (minus 20%) loss provisions. The total value of the deposits owned by residents was 10.8 billion Euro in 2015, and 12.4 billion Euro by non-residents.

Having that in mind, the article aims to shed light the understanding the biggest challenges facing the banking industry in the age of digitalization. The purpose of the article is to study the performance of the Latvian bank in their digitalization.

Literature Review

Various studies have been conducted for the changes in Baltic States, digital transformation for the banking industry.

Changes in Baltic States

In August 1991 the Baltic States broke loose from the Soviet Union and regained independence after almost 50 years of Soviet rule. As a result, the Nordic countries acquired three new neighbors on the eastern shore of the Baltic Sea. The Baltic States are relatively small in terms of both area and population. Estonia, the northernmost of the three, has a population of 1.4 million, of which almost half live in the capital, Tallinn. Latvia, whose capital is Riga, has a population of 2.3 million, while Lithuania, whose capital is Vilnius, has a population of 3.4 million, cf. Eurostat (2007). The countries have considerable national minorities, primarily Russians in Estonia and Latvia, and Poles and Russians in Lithuania. Until 1991, the Baltic States were an integral part of the Soviet Union, with centrally planned economies, fixed prices and state-owned means of production. However, at the end of the 1980s, the countries gained a certain degree of economic autonomy thanks to Mr. Gorbachev's perestroika reforms. Small private enterprises were allowed, the economies were decentralized to some extent, and the tax systems were restructured. After having regained independence in August 1991, the countries had to make a number of difficult choices in the establishment of the new market economies that were to replace the planned economies. The cornerstones of the reforms were well-known from Latin America and Central Europe, namely (i) liberalisation of production, trade and prices, (ii) stabilisation of inflation, (iii) privatisation, and (iv) institutional reform, cf. Andersen and Stæhr (2006). The implementation of the reforms was challenging since the countries had just regained independence, which meant that they had to build up most government institutions from scratch. In addition, the countries' output collapsed, inflation came close to hyperinflation, Russia imposed trade restrictions, and trade relations with the other former Soviet republics were partly cut off. Despite their unfavourable starting points, all three countries managed to implement extensive reforms over a period of very few years, resulting in a fundamental restructuring of their economies. By the mid-1990s, the countries had been transformed to market economies in which privately owned business enterprises ac-

counted for the major share of output. For the sake of brevity, only sample elements of the reforms are mentioned here. It took the Baltic States only a few years to liberalise their economies. Being very small economies, they opted for a high degree of free trade. In 1992 Estonia completely abolished import duties and quotas and abstained from measures to protect agriculture and other business interests. Latvia and Lithuania maintained certain protective duties, but the tariffs were kept low. From the outset, the Baltic States encountered monetary instability with surging annual inflation that reached around 1,000 per cent in all three countries in 1992. The reason was a strong expansion of the money stock in the ruble zone. Each former Soviet republic thus issued money, expecting the inflation burden to be borne by all countries in the zone. It was therefore necessary to decouple the Baltic States from the ruble zone in order to stabilise inflation. In June 1992 Estonia was the first country to introduce its own currency, and the exchange rate was fixed against the D-mark via a currency board, i.e. the domestic money stock is fully covered by reserves in foreign currency. In 1994 Lithuania introduced a currency board too, but chose to peg its currency to the dollar. In 1994 Latvia introduced a more conventional fixed-exchange-rate regime vis-à- vis the SDR, i.e. the basket of currencies fixed by the International Monetary Fund, IMF, while maintaining a very high level of reserves to domestic money stock (Berengaut, 1998), Chapter III. The three countries chose different approaches to privatisation. Estonia opted for the most radical solution, which was to sell as many business enterprises as possible to foreign investors. Latvia and Lithuania initially opted for complex coupon privatisation schemes for distribution of businesses to their citizens, but these countries subsequently chose to sell many state-owned enterprises to foreign investors. Most of the banking sector is foreign-owned in all three countries. The Baltic States implemented a large number of structural and institutional reforms concerning banking and finance, property rights, business liquidation, regulation and public administration. The most notable reform may be the introduction of the "flat tax", whereby all private individuals pay the same percentage of their income above a certain basic allowance. Estonia was the first to introduce a flat tax rate in 1994, followed by Lithuania later in 1994 and Latvia in 1995. A number of other Eastern European countries have since adopted the same model (Saavedra et al., 2007). As a result of the reforms, the Baltic States soon became integrated into the international economy and the major European institutions. In particular, close relations have been established between the Nordic countries and the Baltic States. Estonia was invited to open negotiations on EU accession in 1997, while Latvia and Lithuania were invited in 1999. All three countries joined the EU in May 2004, which was a stamp of approval to show that they had attained functioning and adaptable market economies – one of the Copenhagen criteria that candidate countries have to fulfill prior to joining the EU. Overall, the Baltic States have shown great commitment to reforms despite their unfavourable points of departure. Quantification of the extent of reform and the degree of market orientation place the Baltic States far ahead of the other countries that emerged from the collapse of the Soviet Union. Such quantification also shows that the Baltic States have reached almost the same level as the former Communist countries in Central Europe, (Andersen and Stæhr, 2006). In several areas the Baltic States have chosen unconventional or radical solutions, in most cases pioneered by Estonia, (Laar, 2002). Ruta and

Vitalija (2015) carried out a thorough analysis of economic globalization impact factors on Baltic countries business environments, which revealed high levels of impacts in the fields of: the liberalization of trade; integration of previously non-connected markets and overall productivity growth; the global value chains influence; the increased significance of outsourcing and services sector; the influence of FDI. The core conclusion of the research carried out is the following: the economic impacts of globalization process are progressively diminishing, however there are new unforeseen impacts evolving and there will be even more challenges for economic subjects to face in the future trying to stay competitive in volatile business environments. Schuller (2011) deals with macroeconomic performance in the Baltic Countries compared with Poland and Sweden. Large variations regarding the macroeconomic development can be observed in the Baltic countries. While between 2000 and 2007 belonging to the "Growth tigers", during the crisis negative changes of GDP close to 20 per cent could be observed. It seems now that the Baltic countries overcame the crisis. Yet, these countries need years of high growth rates to achieve the levels of 2007 regarding GDP and GDP Poland had during the economic and financial crisis an exceptional development; both GDP and GDP pc continued to grow. Sweden on the other hand was in the situation as the average member of the EU27 yet with a strong recovery after the crisis. Braslins et al. (2012) found that evidence about the leading and influencing factors in GDP and issued loans, mutual relations and developing proposals for faster recovery of Baltic States' economies after meltdown in 2008. Empirical research provides the facts that the leading factor between the two variables - GDP and lending is GDP, because the changes in the lending follow after changes in GDP. Granger test analysis, performed for aggregate GDP and lending figures, as well as for six industries, which comprises more than 50% of GDP in each Baltic State: Agriculture, Manufacturing, Construction, Wholesale/Retail, Transportation/ Logistics and Operations with Real Estate, provides controversial results and indicates that some industries output has mutual relationship with availability of financial resources, but business sector development leads to the increase of credits granting by this insuring particular sector future development. Remeikiene et al. (2015) carried out the assessment of the industrial competitiveness of the Baltic States in the EU during the period of economic recession. Latvia has taken strong competitive positions in the industry of raw materials; Estonia also has medium comparative advantage in the industry of raw materials, while Lithuania has the comparative advantage in the industries of mineral fuels, lubricants and related materials. Export competitiveness index (XCI) results showed that all three Baltic States had growing competitive advantage in the industries of food, drinks and tobacco during both the period of economic recession and the period of economic revival. In the period of economic revival Estonia showed the growth potential in the industries of chemicals and related products, while Lithuania – in the industry of raw materials and related products. Aidukaite (2013) under took a study dealing with changes in social policy (social security and health care) in the three Baltic states over the last decade. The study demonstrates that in the period 2008-2012, the differences among the three countries in social policy arrangements have been exacerbated. Estonia has handled the global financial crisis much better and managed to keep more solidarity and universalism in social policy

as well as higher benefit levels as compared with Latvia and Lithuania. In 2004 the largest expansion of the European Union took place and in 2007 the EU welcomed two new member states Romania and Bulgaria. In contrast these new member states differ quite significantly from the old ones both in terms of historical background, legal framework and economic situation. The reasons for joining the EU range from benefiting from better terms of trade, EU allowances, economies of scale and for many of the former communist states a chance to reposition themselves as market economies and members of Europe. (Pridham, 2007) Nevertheless, converging countries that differ on so many levels may be challenging and not always result in positive outcomes and some countries might suffer from an increase in competition, higher prices and welfare losses. (Balassa, 1975). It is interesting to see if and how these new members converge to the rest of the union and what effects this might have. In 1991 Baltic States became independent from Russia after the collapse of communism in 1989. Transition process from centrally planned to market economies was rapid in these three small countries and from very beginning they all showed interest to integrate with rest of the Europe. All three countries were small open economies, and therefore very dependent of foreign trade, trade liberalization was on top of their list after regaining their independence (Sumilo, 2006). The Karilaid et al. (2014) study results show that the changes (and the speed of changes) of interest rates, GDP and money supply have occurred relatively fast, meaning that the rising area of the LM curve has been shorter than theory would predict. Market reactions took place quickly and simultaneously – there was no time for the slow restructuring, thus liquidity needs were higher than generally. Baltic States were included in an EU-East-group with low- income and high human capital endowments. The analysis indicated that these states would benefit from the integration and have increased income levels given that the poorest of the new entrants could exploit a comparative advantage in the high skill-intensity sectors (Marques & Metcalf, 2005).

Digital Transformation

The DT is a relatively novel notion. One of its first uses can be tracked back to a book *Digital Transformation: The Essentials of e-Business Leadership* by two KPMG strategists in the year 2000 (McCarthy & Patel). Possibly the earliest strict definition of the term appears in a work of Fors and Stolterman (2004, pp. 687-689), where they described DT as "changes that the digital technology causes or influences in all aspects of human life"; according to the authors, DT leads to "a world increasingly experienced with, through, and by information technology." The 2015 study of MIT Sloan Management Review's and Deloitte's coins the term "digital maturity" – a degree of how much of an effect, the digital technologies have had over the processes, talent engagement, and business models. The study's results suggested that, remarkably, the biggest responsibility lies in how companies integrate technologies to transform their businesses rather than the availability and distribution of said technologies on their own. The stages of digital maturity, the authors refer to as "early", "developing," and "mature" in order of ascending maturity; they remark that the maturing digital organisation cannot stand the presence of skill gaps – this underlines the importance of the ability to conceptualise the digital impacts. (Kane, Palmer, Phillips, Kiron & Buckley 2015, pp. 3-7) The Internet, smartphones, e-commerce, and related phenomena are sometimes referred to as "hyper-connectiv-

ity", a term originally coined by Quan-Haase and Wellman: it implied the use of multiple means of communication (Wellman 2001). One may argue there is more to it, however. The Internet in particular presents a variety of venues for service development and delivery; it is possible to distinguish that there are two groups of related skills: medium- and content-based. Knowledge of the medium, i.e. the Internet environment, can be summarized as having formal ability to navigate and operate the digital services, whereas the content-related skills are more in-depth, concerning content creation and management, communication, and Internet-driven business strategies (van Dijk & van Deursen 2014, p. 42). With social media, mobile apps, and other digital tools being as commonplace as they are, they play a progressively greater role in sourcing and attracting talent; moreover, open online courses and other digital learning tools allow for additional opportunities in learning and development. An Accenture Strategy's research suggests that, on the contrary to the conventional opinion, employees themselves present one of the key drivers of the digital progress: 70% indicated that the digital technologies bring innovation, productivity, and agility to the company; around 71% claimed they were pro-actively acquiring digital skills. (Brecher, Laurenceau & Sloman 2016, pp. 6-8.) Moreover, the digitalization of everyday life has become the key enabler of remote work and employees using their own devices for work: this is not just a prime opportunity for virtual collaboration but also creates greater flexibility and even encourages employees to work remotely outside of their normal working hours (Buchanan, Kelley & Hatch 2016, pp. 1-3).

Digital Transformation of the Banking Industry

It has been chosen to focus on how banks manage digital transformation since the banking sector contains all the core traditional business units and offers a lot of innovation (Accenture Research, 2016, p. 2). Per the study of 391 large enterprises world-wide by Capgemini and MIT Sloan, the banking industry is second only to the high technology sector in terms of its digital maturity (Westerman, Tannou, Bonnet, Farraris & McAfee, 2012). Accenture Research compiled a report in the scope of their Technology Vision 2016 study that offered a specific perspective for the banking industry. Amongst the findings of the report, there is, notably, a trend of shifting job planning from job functions-centered to a projects-focused one: out of 316 international bankers, 80% agree; 74% expect a transition towards a more "fluid" workplace, with an emphasis on more flexible generalists hires holding the core competencies in the internal workforce, along with an increase in instances of outsourcing peripheral competencies, either via traditional sources (i.e. consultancies, on-demand contractors, etc.) or participative public pools (e.g. application development companies, crowdsourcing, etc.) (Accenture Research, 2016, p. 9). The key trend related to the digitalization of the core banking, however, is the digital banking and the financial technology (also known as FinTech) service offerings. The digitalized services within the banking sector seem to prove such a fertile ground for innovation, so that non-bank digital companies like Google and Alibaba started to enter the scene with their FinTech solutions; payments, traditionally a quarter of banks revenues, present the most common service to be digitalized by the tech giants and FinTech start-ups.

(Busch & Moreno, 2014.) Despite the digital opportunity, as the diffusion of innovations would suggest, few banks digitize processes en masse and even fewer commit full time to the digital banking: for in-stance, McKinsey & Company reports that, across retail banks in Europe, only 20 to 40 per-cent of processes are digitized, and the vast majority of firms allocate less than 0.5% of their expenditures to the digitalization; moreover, the estimate is that up to 25% of costs could be saved by digitally transforming the processes (Olanrewaju, 2013).

Overview of the Structure of the Latvian Banking

Recent trends in financial markets

Latvia is a small, open economy and its financial sector is small with local demand for global financial market services limited. The banking sector in Latvia is split into two segments: domestic-centered banks, where Scandinavian banks and their branches have a dominant role, and banks which are focusing mainly on servicing non-residents while having no close links with the domestic economy. The latter banks are mainly domestically owned (only 3.6 % of banking sector capital originates from Russia and 7.1% - from the CIS). Overall non-resident share in banks' capital is high at 85.8% (June 2015). Foreign direct investment mostly flows into the manufacturing industry, wholesale trade, financial and insurance services. Since Latvia joined the European Union in 2004, the banking sector has grown rapidly and dominates the financial system (accounting for 90.2% of total assets of the financial system). During 2005- 2007, there was a 50% per annum growth in loans which contributed to the increase in banking income and profitability, with ROE reaching 24-27%. In the aftermath of the financial crisis, the banking sector suffered significant losses from 2009 to 2011 due to the significant need for loan provisions. In 2014, the banking sector reported profits of EUR 311 million with the majority of Latvian banks reporting profits. Profitability of the banking sector improved further and the ROE reached 11.1% at year end. The operating income of the banking sector totaled EUR 916 million in 2014, representing a slight year-on-year decrease over 2013 (-3.1%). Interest income continued to decline, and given the decrease of liabilities to monetary financial institutions (MFIs) by almost one-fifth over the year and the low interest rate environment, banks were able to reduce their interest expenditures on leverage; however, the net interest income decreased by 2.0% in comparison to 2013. The banking sector posted a total profit of EUR 258 million in the first seven months of 2015 (a growth of 22% compared to the same period in 2014). Fourteen Latvian banks and five foreign bank branches, which together account for 94% of banking assets, reported a profit. The increase in profit was affected by a rise in net commission fees and decreasing charges for loan loss provisions and administrative expenses.

Central bank and monetary policy framework

On 1 January 2014, Latvia joined the euro area where the single monetary policy is implemented by the participating national central banks and the European Central Bank, together forming the Euro system. As a part of the Euro system, the Bank of Latvia participates in the formulation of the single monetary policy as well as in making and implementing related decisions, fulfilling the objective of maintaining price stability as laid down in the Treaty on the Functioning of the European Union. The Law on the Bank of Latvia forms the legal basis for Bank of Latvia and its

operations. As for the Bank of Latvia, the appointment procedure, length of the mandate and reappointment of the Governor and other members of the Council of the Bank of Latvia are stated in the Law on the Bank of Latvia. The Governor, Deputy Governor and other members of the Council of the Bank of Latvia are appointed by an open vote of the Saeima (Parliament). The Governor is appointed upon the recommendation of at least ten members of the Saeima, which is composed of 100 members, while the Deputy Governor and other members of the Council are appointed by the Saeima upon the recommendation of the Governor. The Council of the Bank consists of eight persons: the Governor, the Deputy Governor and six members of the Council, and is chaired by the Governor. The Governor of the Bank of Latvia, the Deputy Governor and members of the Council hold office for six years. In case any member of the Council resigns or his/her office is otherwise terminated before his/her term of office has expired, a new member of the Council of the Bank of Latvia is appointed for a term of office of six years. There are no limitations or prohibitions in the law regarding the reappointment of the Governor, the Deputy Governor or other Council members of the Bank of Latvia. The Governor of the Bank of Latvia, the Deputy Governor and members of the Council of the Bank of Latvia may be relieved from office by the Saeima before the term of office only in the following circumstances: 1) he/she has submitted his/her resignation; 2) he/she has been guilty of serious misconduct pursuant to Article 14.2 of the Statute of the European System of Central Banks and of the European Central Bank; or 3) on grounds of dismissal stipulated by Article 14.2 of the Statute of the European System of Central Banks and of the European Central Bank. The Governor may refer the Saeima's decision on his/her dismissal from office to the court as prescribed in Article 14.2 of the Statute of the European System of Central Banks and of the European Central Bank. The Deputy Governor or a member of the Council may refer the Saeima's decision on his/her dismissal from office to the court as prescribed by Administrative Procedure Law. Upon joining the Eurosystem, the structure of the Bank of Latvia's balance sheet has been changed in line with the breakdown used by other central banks of the Eurosystem and in drafting the consolidated financial statements of the Eurosystem. The new structure of the balance sheet is more detailed, with the breakdown by residence (euro area residents and non-euro area residents), by currency (euro and foreign currencies) and major type of operations (e.g. monetary operations).

Financial institutions and financial groups

Financial and capital market participants in Latvia are issuers, investors, banks, insurers, insurance brokers, reinsurers, reinsurance brokers, private pension funds, regulated market organizers, depositories, investment firms, investment management companies, alternative investment fund managers, credit unions, external credit assessment institutions (rating agencies), payment institutions and electronic money institutions according to legislation. The Financial and Capital Market Commission (FCMC) regulates and monitors the functioning of the financial and capital market participants. Banks dominate the financial system of Latvia with a 90 per cent market share in total assets of the financial system. Among others, there are also non deposit-taking intermediaries such as consumer credit providers (non-bank financial institutions) that are supervised by the Consumer Rights Protection Centre, and intermediaries that provide investment

service using internet platforms (for forex and CFD transactions), which are supervised by the FCMC. Supervision of investment intermediaries that provide investment service using internet platforms is a challenge because they often do not have an establishment in Latvia and are thus not authorized to provide the relevant services, the FCMC has limited capacity to regulate or terminate their activity. The FCMC has issued public warning of unauthorized service providers to raise risk awareness and discourage investors from using unauthorized services. Crowd funding or collective financing platforms are forms of alternative financing that have experienced rapid development in Latvia in recent years. In order to facilitate alternative financing in Latvia, the Ministry of Finance has initiated development of a new regulation on the peer-to-peer lending and amendments to develop investment crowd funding (or equity crowd funding). The new regulation will establish regulatory requirements, such as rules for management compliance, AML requirements and other prudential measures to address the risks of peer-to-peer lending platforms, and existing regulation will be amended to accommodate the specific issues of equity crowd funding platforms. Cross-sector activity of the banking, insurance and securities sector is relatively low in Latvia. In addition, banks are entitled to provide non-financial services only to the extent that these services are linked with financial services. At the end of 2014, 12 financial groups were controlled by commercial banks (81% of market share in terms of assets). All together these financial groups have 113 subsidiaries, 92 of which are operating in Latvia. Total assets of the bank subsidiaries at the end-2014 accounted for 9.6% of total assets of parent banks. The majority of assets of subsidiaries were from leasing companies (22.7%), auxiliary undertakings (21.7%), banks (42.8%) and other financial institutions (11.6%). Banks in Latvia can be classified into foreign (mainly Scandinavian) owned banks, which focus on servicing residents and dominate in the resident loans and deposits market and banks, and those which specialize in servicing non-residents, and which are mainly domestic private person-owned banks. The Law on Financial Conglomerates establishes the definition of conglomerates and the supplementary supervision, although currently there are no financial conglomerates under the supervision of FCMC. There are 17 banks and 10 branches of foreign banks operating in Latvia at the end of June 2015 and 85.8% of total capital originates from outside of Latvia. The three EEA bank subsidiaries and 10 EEA 15 bank branches comprise 48% of banking sector assets and 81% of resident loan portfolio, all with Nordic parent banks.

Research Methodology

This study employed a descriptive research design. The design was used to gather information on a population at a single point in time. This study was about performance of Latvian Bank in their digitalization. In this type of research study, either the entire population or a subset thereof is selected, and from these individual data are collected to help answer research questions on interest (Kothari, 2004). A questionnaire was the main instrument for collecting the primary data from the respondents. The structured questions were used in an effort to save time and cost to facilitate an easier analysis. The data were collected at one higher education institution for Business Administration and Finance in Latvia. The data were collected during the period from November 3 until November 10, 2016. The total number of respondents for this study was 150. The reliability and validity of the instrument was

also tested.

Hypotheses:

H1: There is no significant difference between gender with respect to ability to use mobile phone while making banking transactions.

H2: There is no significant difference between gender with respect to ability to ATM while making banking transactions.

H3: There is no significant difference between the last visits of bank branch with respect to transfer of money.

H4: There is no significant difference between the last visits of bank branch with respect to withdrawal of money.

*H5: There is no correlation between ability to use the digitalization devices and opinion about mobile banking menu on phone***.**

Results and Discussions: The results are presented from quantitative data analysis using SPSS.

Simple Percentage Analysis: Simple percentage analysis is used to interpret the demographic characteristics of the respondents.

Table 1. Demographic Profile of the Respondents

Demographic Characteristics	**Particulars**	**Number of Respondents**	**Percentage**
Gender	Male	72	48.0
	Female	78	52.0
Current Status	A Bachelor Student	68	45.3
	Working Bachelor Student	45	30.0
	Working Master Student	37	24.7
Home Region	Riga	72	48.0
	Vidzeme	30	20.0
	Kurzeme	16	10.7
	Zemgale	16	10.7
	Latgale	16	10.7
Age	18-21 Years	74	49.3
	22-25 Years	52	34.7
	26-30 Years	12	8.0
	31-35 Years	10	6.7
	Over 35 Years	2	1.3

The above table reveals that the demographic profile of the respondents.

Test for Gender with the ability to use the devices while making banking transactions

To ascertain whether there exists any significant difference in gender with the ability to use the devices viz., mobile phone and ATM while making banking transactions.

Table 2. Gender with respect to ability to use devices while making banking transactions

	Gender	N	Mean	Std.Deviation	Df	Z	Sig.(2-tailed)
Ability to use Mobile phone	Male	72	3.8194	1.11742	148	0.203	0.839
	Female	78	3.7821	1.13558			
Ability to use ATM	Male	72	3.8889	1.09487	148	0.095	0.924
	Female	78	3.8718	1.09733			

The above table indicates that Z-test for gender with ability to use the devices while making banking transactions.

Gender with ability to use Mobile Phone: The Z-value is 0.203, degree of freedom 148 and two-tailed significance is 0.839. The two-tailed significance for ability to use mobile phone while making banking transactions indicates that P>0.05 and is not significant. It is concluded that there is no significant difference between male and female ability to use mobile phones while making banking transactions.

Gender with ability to use ATM: The Z-value is 0.095, degree of freedom 148 and two-tailed significance is 0.924.

The two-tailed significance for ability to use ATM while making banking transactions indicates that P>0.05 and is not significant. It is concluded that there is no significant difference between male and female ability to use ATM while making banking transactions.

Last Visit of Bank Branch and transfer of money

To ascertain whether there exists any difference in the mean value of last visit of bank branch and transfer of money.

Table 3. Descriptive Statistics for Last Visit of Bank Branch and transfer of money

Last Visit of Bank Branch	N	Mean	Std.Deviation
One Week ago	10	1.000	0.00000
Two weeks ago	17	1.294	0.46967
One month ago	34	2.1765	0.38695
Two months ago	24	3.0833	0.28233
So long ago, I do not remember	65	4.3538	0.48188
Total	150	3.0867	1.31045

Table 4. ANOVA - Last Visit of Bank Branch and Transfer of Money

Source	Sum of Square	D.f.	Mean Square	F value	Sig.
Between Groups	230.708	4	57.677	332.327	0.000
Within Groups	25.165	145	0.174		
Total	255.873	149			

Mean score of "So long ago," I do not remember is high in respondents last visit of bank branch. Hence, it is observed that respondents last visit of bank branch is so long ago, I do not remember are high in most often transfer of money. As calculated F value (332.327) is greater at five per cent level, there exists a significant difference in last visit of bank branch and money transfer among respondents classified on the basis of last visit of bank branch.

Hence, the null hypothesis is rejected. To find out the category respondents who differ significantly from other respondents with respect to money transfer, the following table has been framed using post –hoc test.

Table 5. Money Transfer – Post Hoc Test

(I) Bank visit	(J) Bank visit	Mean Difference (I-J)	Sig.
one week ago	two weeks ago	-.29412	.394
	one month ago	-1.17647*	.000
	two months ago	-2.08333*	.000
	so long ago, I don`t remember	-3.35385*	.000
two weeks ago	one week ago	.29412	.394
	one month ago	-.88235*	.000
	two months ago	-1.78922*	.000
	so long ago, I don`t remember	-3.05973*	.000
one month ago	one week ago	1.17647*	.000
	two weeks ago	.88235*	.000
	two months ago	-.90686*	.000
	so long ago, I don`t remember	-2.17738*	.000
two months ago	one week ago	2.08333*	.000
	two weeks ago	1.78922*	.000
	one month ago	.90686*	.000
	so long ago, I don`t remember	-1.27051*	.000

	one week ago	3.35385*	.000
so long ago, I	two weeks ago	3.05975*	.000
don`t remember	one month ago	2.17738*	.000
	two months ago	1.27051*	.000

* The mean difference is significant at the 0.05 level

From Table 5 post-hoc, it is found that respondents visit their bank branch long ago differs significantly from other frequency of bank visit by the respondents, which implies that visit their bank branch long ago respondents have higher level of money transfer through various digitalization mode than the other frequency of bank branch visited by the respondents.

Table 6. Descriptive Statistics for Last Visit of Bank Branch and Withdrawal of Money

Last Visit of Bank Branch	N	Mean	Std.Deviation
One Week ago	10	1.0000	0.00000
Two weeks ago	17	1.0000	0.00000
One month ago	34	1.9706	0.17150
Two months ago	24	2.6250	0.49454
So long ago, I do not remember	65	3.5846	0.49662
Total	150	2.6000	1.061865

Table 7. ANOVA - Last Visit of Bank Branch and Transfer of Money

Source	Sum of Square	D.f.	Mean Square	F value	Sig.
Between Groups	145.620	4	36.405	235.865	0.000
Within Groups	22.380	145	0.154		
Total	168.000	149			

Mean score of So long ago, I do not remember is high in respondents last visit of bank branch, Hence, it is observed that respondents last visit of bank branch is so long ago, I do not remember are high in most often withdrawal of money.

Last Visit of Bank Branch and withdrawal of money

To ascertain whether there exists any difference in the mean value of last visit of bank branch and withdrawal of money

As calculated F value (235.865) is greater at five per cent level, there exists a significant difference in last visit of bank branch and withdrawal of money among respondents classified on the basis of last visit of bank branch. Hence, the null hypothesis is rejected. To find out the category respondents who differ significantly from other respondents with respect to with drawl of money, the following table has been framed using post

–hoc test.

Table 8. Withdrawal of Money – Post Hoc Test

(I) Bank visit	(J) Bank visit	Mean Difference (I-J)	Sig.
one week ago	two weeks ago	.00000	1.000
	one month ago	-.97059*	.000
	two months ago	-1.62500*	.000
	so long ago, I don`t remember	-2.58462*	.000
two weeks ago	one week ago	.00000	1.000
	one month ago	-.97059*	.000
	two months ago	-1.62500*	.000
	so long ago, I don`t remember	-2.58462*	.000
one month ago	one week ago	.97059*	.000
	two weeks ago	.97059*	.000
	two months ago	-.65441*	.000
	so long ago, I don`t remember	-1.61403*	.000
two months ago	one week ago	1.62500*	.000
	two weeks ago	1.62500*	.000
	one month ago	.65441*	.000
	so long ago, I don`t remember	-.95962*	.000
so long ago, I don`t remember	one week ago	2.58462*	.000
	two weeks ago	2.58462*	.000
	one month ago	1.61403*	.000
	two months ago	.95962*	.000

* The mean difference is significant at the 0.05 level

From the above post-hoc table, it is found that respondents visit their bank branch long ago differs significantly from other frequency of bank visit by the respondents, which implies that visit their bank branch long ago respondents have higher level of withdrawal of money through various digitalization mode than the other frequency of bank branch visited by the respondents.

Analysis of relationship between ability to use the digitalization devices and opinion about mobile banking menu on phone.

Table 9. Pearson Bivariate Correlation Coefficients

	Mobile Phone	ATM	Internet	POS	Debit Card	Credit Card	Rate 1	Rate 2	Rate 3	Rate 4	Rate 5
Mobile Phone	1										
ATM	0.970**	1									
Internet	0.982**	0.974**	1								
POS	0.983**	0.979**	0.990**	1							
Debit Card	0.968**	0.997**	0.972**	0.977**	1						
Credit Card	0.937**	0.940**	0.955**	0.956**	0.938**	1					
Rate 1	0.939**	0.961**	0.943**	0.949**	0.964**	0.911*	1				
Rate 2	0.950**	0.952**	0.948**	0.958**	0.955**	0.915**	0.981**	1			
Rate 3	0.919**	0.934**	0.923**	0.928**	0.936**	0.892**	0.965**	0.956**	1		
Rate 4	0.918**	0.927**	0.922**	0.926**	0.929**	0.891**	0.957**	0.954**	0.985**	1	
Rate 5	0.918**	0.932**	0.922**	0.927**	0.934**	0.891**	0.962**	0.954**	0.985**	0.970**	1

**. Correlation is significant at the 0.01 level (1-tailed)

The above table shows that correlation analysis of relationship between ability to use the digitalization devices and opinion about mobile banking menu on phone. Ability to use digitalization devices viz., mobile phone, ATM, internet, POS, debit card, credit card are correlated with the respondents mobile banking menu on their phone opinion statements viz., my mobile banking menu is very easy to navigate, my mobile banking menu is very easy to understand, it is easy to make payments, it is easy to make transfer money and it is easy to make balance enquiry.

Conclusion

Digitalisation is remarkably changing business worldwide, builds new opportunities and at the same time disrupts long-successful business models, while accelerates new challenges. In this study the performance of Latvian Bank in their digitalization was investigated through its customers. The research findings indicate that gender does not play a significant role with respect to ability to use digitalization devices while making bank transactions. Further it revealed that significant difference is there for the customer visit to bank branch and transfer of money and withdrawal of money. Because of digitalization the customer's frequency of bank visit is so long. It also shows that there is a significant relationship between ability to use the digitalization devices for banking transactions and opinion about mobile banking menu on phone. Finally it is concluded that digitalization play a significant contribution to the performance of Latvian Bank.

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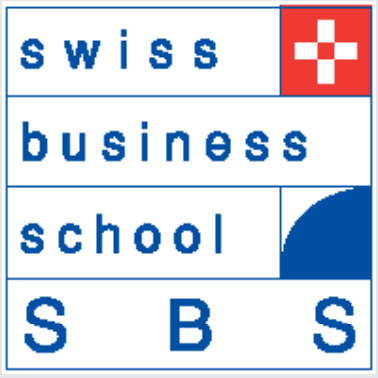

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