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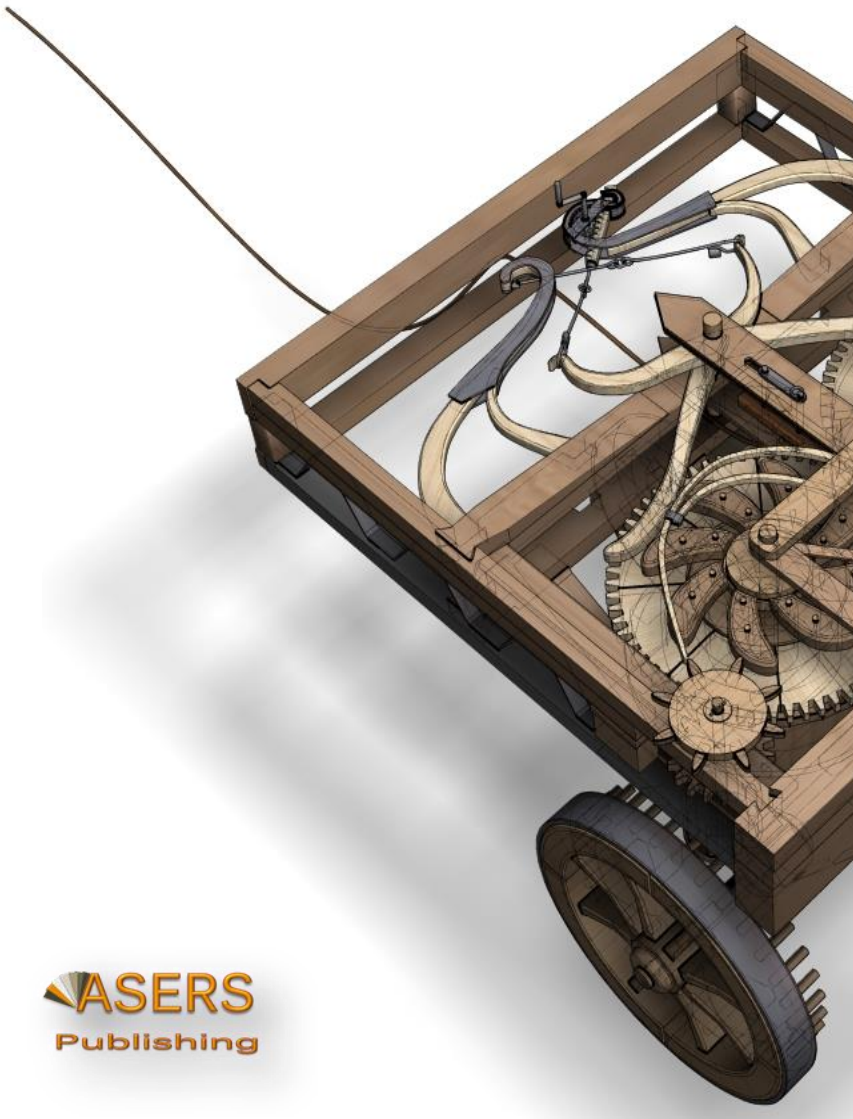

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Theoretical and Practical Research in Economic Fields

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HOW BIG ARE THE EMPLOYMENT EFFECTS OF MICROLOANS? EVIDENCE FROM A CASE STUDY IN LATVIA

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Abstract:

Microloans to small and medium-sized enterprises have become popular in many countries. However, evidence on the economic and social impact of microfinance is scarce. In an attempt to partly fill this gap, this paper looks at a case study and analyzes the economic impacts of the microloan programme of the Latvian development bank Hipoteku Banka. In our analysis, we focus on the following questions: Did the microloan programme increase employment within the supported firms? And was it able to contribute to the economic development of rural areas and the decrease of economic inequalities across regions? We find that the firms that were granted a loan from Hipoteku Banka on average considerably increased their employment during the loan period, as well as the microloan programme made a successful contribution to the economic development of rural regions in Latvia.

Keywords: microloan, employment, Latvia.

JEL Classification: G21, E24

1. Introduction

Nowadays microloans to small and medium-sized enterprises have become popular in many countries of Central and Eastern Europe. However, evidence on the impact of microfinance on variables such as employment and future financial access of the supported enterprises is scarce. In an attempt to partly fill this gap, this paper looks at a case study and analyzes the economic and social impacts of the activities of the Latvian development bank Hipoteku Banka.

While microloans are an established tool in pursuit of the goal of poverty reduction in economically low developed countries, microfinance has also become more popular in economically more developed countries such as the countries in Central and Eastern Europe. By providing microloans to businesses with limited access to bank financing, one intends to promote the establishment of small and medium-sized enterprises. Especially, self-employment and the associated creation of micro-enterprises are seen as a way to help unemployed people to escape poverty. This objective is especially pertinent for Latvia, where the economic crisis in 2008 and 2009 was very severe and has cast many people into unemployment and poverty. Thus, increased access to financial services may not only have positive effects on the individual firm level, but can also be expected to contribute to macroeconomic growth and to lower unemployment. While financial development measured by overall loans or

deposits in an economy has long been recognized as an important determinant of macroeconomic development (see the seminal contribution by King and Levine (1993)), the importance of the degree of inequality in the access to finance has recently gained more attention (see Beck *et al*. (2009) and Guiso *et al*. (2004) for important empirical contributions and e.g. Baldi (2013) for a theoretical analysis).

Microloans can be one way to improve financial access for small businesses. This implies that microloans should not constitute an end in itself, but rather a way to fill a gap in cases where small enterprises find it hard to get access to traditional forms of finance. Commercial banks are often reluctant to grant small loans, because bankers perceive such loans as being associated with high risk and overhead costs, while providing low returns (see Armandáriz and Morduch (2010) and Cull *et al*. (2009a)). As a result, access to finance is particularly difficult for such small businesses. To fill this gap, microfinance institutions grant loans to businesses that may not be able to provide the collateral usually demanded by commercial banks. These microloans are meant to allow small enterprises to expand their planning horizon and to increase their investments. Proponents of microfinance also occasionally refer to de Soto (2000), who emphasized the importance of giving people the opportunity to use their skills and property for productive purposes.

However, as e.g. pointed out by Banerjee and Duflo (2009), reliable evidence on the effects of microfinance is scarce. There also exists a literature questioning the economic and social impact of microloans (see e.g Bateman (2010)). Critics argue that microloans distort the functioning of the free market. In particular, small businesses benefiting from microloans may crowd out existing enterprises which do not have the same favorable financing conditions. It is also argued that impact studies tend to suffer from the so-called survivor bias, which refers to the tendency of impact studies to focus on success stories and neglect those firms which have left the market. In addition, some researchers find that the positive effect of microcredit is achieved only in the short term. In the long term, the use of active microcredit instrument provides an unfavorable development trajectory (Bateman, Chang, 2013).

This paper aims at providing further empirical evidence on the economic effects of microloans using as a case study the activities of the development bank Hipoteku Banka in Latvia. We analyze the microloan programme of this bank between 2009 and 2011. In our analysis, we focus on the following questions: Did the microloan programme increase employment within the supported firms? And was it able to contribute to the economic development of rural areas and the decrease of inequalities across regions? We analyse a dataset provided by the Hipoteku Banka and compare the results with economic indicators of Latvia and its regions. Using these indicators, we try to partially compensate for the absence of a control group. We find that the firms granted a loan from Hipoteku Banka on average considerably increased their employment during the loan period. While one cannot clearly identify the specific effect of the microloan programme on this employment increase, the rise in average employment is nevertheless a clear sign that Hipoteku Banka supported serious micro-enterprises and on average helped the enterprises through its loans to succeed. The regional spread of the loans has been rather even across the rural regions of the country and there have not been considerable differences in the performance of the supported firms across regions. Thus, one can conclude that the microloan programme made a successful contribution to the economic development of rural areas.

This paper is organized as follows. Section 2 gives an overview of microfinance for small enterprises in Central and Eastern European countries and describes the activities of Hipoteku Banka. Section 3 gives an overview of the economic environment in Latvia and its regions during the years in which the microloan programme was implemented. The developments in the Latvian economy will be very useful in order to compensate for the absence of a control group when assessing the economic impact of the microloan programme. In section 4, the results of the economic impact analysis of the Hipoteku Banka are shown and discussed. Finally, section 5 presents the conclusion.

2. Microloans for small enterprises in Central and Eastern Europe – a short overview

2.1. Microloans in Central and Eastern Europe.

In Central and Eastern European countries, microloans are used to promote self-employment and the development of small enterprises (for a useful overview, see CGAP and MIX (2010)). Especially in the current economic environment characterized by stagnation or weak growth, microcredits are seen as a useful tool to encourage new businesses and help soften the impacts of the financial and economic crisis (see e.g. European Commission (2010) and Eriksson *et al*. (2011)).

In most countries, microcredits are targeted to small enterprises employing less than 10 people, and to unemployed people who plan to start their own businesses, but do not have access to traditional banking services. Microloans in Europe are usually defined as loans of up to € 25'000, which is considerably higher than

loans for the poor in economically less developed countries. However, in countries of Central and Eastern Europe, the loan amount is often smaller and rarely exceeds €10'000. The first microloan institutions in Central and Eastern European were established in the early 1990's. Currently, programmes promoted by the European Commission are the most important providers of microloans in Central and Eastern Europe. Microloans can be particularly important for rural areas. Examples of targeted business activities are self-employed entrepreneurs, small farmers, local retailers as well as small manufacturing firms and service providers.

Microloan activities have growth rapidly in the countries of Central and Eastern Europe. However, this increase in the number of microloans has often not been accompanied by impact studies confirming the economic and social contribution of microloans. The cost of the impact studies as well as the difficulty of obtaining reliable data on the impact of microfinance has in many cases led to a lack of systematic evaluation of the performance of microfinance institutions. Improving our understanding of the impacts of microfinance institutions becomes particularly important when discussing the question of microfinance regulation and how the currently implemented tighter regulations of the financial sector should be applied to microfinance institutions (see Cull *et al*. (2009b), BIS (2010) and Vento (2011)).

Microloans in Latvia: Short Experience Overview.

Microfinance services in Latvia is distributed relatively weak, and as one of the main obstacles the insufficient number of institutions providing microloan services and limited financial support from government for such activities could be mentioned, as well as potential clients often show rather weak interest. Microloans in Latvia have not yet considered an essential support tool for business promotion (BNS 2011). Mostly in Latvia other forms of support measures for medium and small enterprises were promoted, such as tax cuts, bureaucratic procedures facilitation, simplification of accounting report, the share capital reduction, stakeholder training and others. (Ministru Kabinets, 2009).

As shown by studies of the European Microfinance Network about microfinance sector in the European Union since 2004 to 2011, in surveys from Latvia participated only three active micro-lending institutions (Bendig, Unterberg, Sarpong, 2012), which indicates that the microcredit sector is weakly distributed in Latvia.

For the goal of developing the microfinance sector in Latvia, the experience of microfinance institutions in Eastern Europe would be possible to use. The activities in the field of microfinance in Eastern Europe is characterized by: the orderly legal framework in the field of microfinance, a close cooperation with development and employment agencies, as well as with microfinance institutions in other countries (searches for the potential clients), close co-operation with commercial banks, active marketing policy, effective selection mechanisms (Brown, 2013). However, despite the sector's long-standing and relatively successful experience, the microfinance sector in Eastern Europe experienced a severe downturn after the financial crisis despite the fact that the microfinance sector by itself is considered as a relatively stable against to changes of economic cycles. Effects of transient stage of economics, as well as the structure of loans are mentioned like main reasons for this situation (Loncar, Novac, Cicmil, 2013).

Right now the Latvian experience in microloans is based on programs such as: the ALTUM program with cofinance from the European Union's structural funds (2006-2008), the initiative of the European Investment Fund JASMINE (2008-2013), initiative of the European Comission the microcredit instrument "Progress" (2010-2013) and the Latvian-Swiss Cooperation Programme (2011-2015), as well as collaboration between business incubators and the Hipoteku Banka.

Development of the microcredit sector in Latvia can be considered as rather slow but purposeful with active use of the opportunities to attract external financial resources and foreign experience. In the framework of the programms ALTUM and JASMINE the goal to create an environment (knowledgeable entrepreneurs and micro-lenders), in which a microfinance sector could successfully develop, is achieved, while in the framework of the programms "Progress" and the Latvian-Swiss Cooperation this environment is filled with really working companies through the provision of financial flows.

Studies suggest that microcredit institutions attract more customers and earn higher profits in countries with low access to traditional financing, so that they satisfy the query where banks cannot do it (Vanroose, D'Espallier, 2012). This fact may in part explain why the Latvian microcredit sector is relatively poorly developed. During the period from 2004 till the global economic downturn in Latvia a very sharp increase in loans in the traditional sector was observed. Development of micro-credit sector and increase of the service's popularity in Latvia gradually began from time, when banks due to severe impacts from global economic downturn defined rigorous restrictions in traditional bank lending that are still significantly reduces the access of companies to financial resources. However, the micro-credit institutions help poor people in countries with well-developed financial system, thereby contributing to increased competition between micro-credit and traditional sectors. This

competition could weaken the execution of mission of microcredit institutions (Vanroose, D'Espallier, 2013). Therefore it is important to correctly define the range of clients and supported industries.

2.2. A Short history of the Latvian development Bank Hipoteku Banka

The Hipoteku Banka was founded in 1995 and has since then provided a sizable number of loans and financial consulting to small and medium-sized enterprises. After Latvia joined the European Union in 2004, a special unit - the Promotional Programmes Office ALTUM - was created within the Hipoteku Banka in order to separate the publicly funded microloan activities from the commercial activities of the bank. In the midst of the severe economic crisis in Latvia, the Latvian government decided in 2009 to fully transform the Hipoteku Banka into a development bank. Since then, the Hipoteku Banka has focused on providing microloans and financial consulting to microbusinesses and self-employed people. These activities are meant to contribute to the economic recovery and to combat the massive unemployment in Latvia. The Hipoteku Banka focuses its support on small entrepreneurs in rural and economically less developed areas. Businesses in the area of Riga, by far the economically most developed region in Latvia, were first excluded from the programme, but were also allowed to apply beginning in December 2010.

2.3. The data and methodology of research

The aim of the research is to evaluate whether the microloan programme increases employment within the supported firms and thus contributed to economic development and decreased the high regional differences

The data from Hipoteku Banka for the period of time since 2009 till 2011 and data from Central Statistical Bureau of Latvia from 2008 till 2011 for this purpose were used. For each firm, data is available on job creation as well as the number of jobs in the beginning and the end of period studied. In addition, the localization and the sector of economic activity of each firm are known. This allows us to calculate the number of jobs created per region and per sector of economic activity.

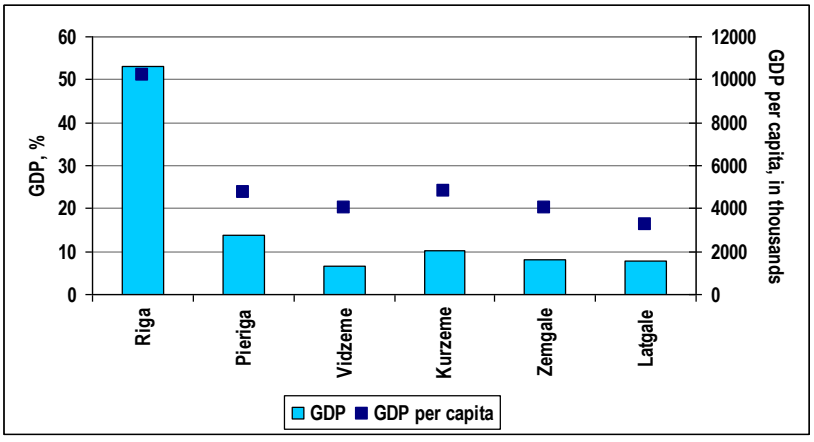
The calculation of the Location Quotient (LQ) (Florida University, 2013) was based on data about regional employment by kind of economic activity, as well as on data about microloans. Results of LQ calculations provide information about regional specialization and thus indicate whether microloan programme contributes to the changes in situation or supports sectors of regional specialization.

3. Description of the economic environment in Latvia from 2009-2011

3.1. Regional distribution of the economy

This section provides a statistical characterization of the Latvian economy, during global economic downturn, which affected the Latvian economy very strong and worsened financial accessibility and employment level.

Understanding the economic situation during the microloan programme is essential, when it comes to interpreting the impact results of the microloan programme carried out in section 4. The economic data of Latvia and its regions will allow us to compare the development of the firms in the microloan programme with developments going on in the Latvian economy.



Source: Central Statistical Bureau of Latvia

Figure 1. GDP and GDP per Capita across Regions in Latvia in 2010, in %, in Lats

First, it is interesting to have a closer look at the economic structure of Latvia, which is divided into fifth regions: Riga, Vidzeme, Kurzeme, Zemgale and Latgale. As can be seen in Figure 1 Latvia is experiencing unequal economic development of regions. Riga is the clear leader, which provides more than half of the country's GDP. The level of GDP is lower than in Riga across other regions, which are more rural and economically less developed than Riga. The importance of the region of Riga in the Latvian economy can be even better seen in Figure 1. GDP per capita is by far the highest in the region of Riga. The other regions are economically less developed and their GDP per capita is below the Latvian average. In these regions, GDP per capita is rather similar.

Table 1 indicates that nearly half of the population lives in the region of Riga, where two-thirds of the Latvian GDP is concentrated. The rest of the population is relatively evenly distributed over the other four regions. However, despite the differences in terms of population in Latvian regions, the amount of economically active and employed population between regions is more or less equivalent. The concentration of the labor force indicates on differences between regions. Riga specializes on "Transportation, storage, information and communication" sector, while the remaining regions on "Agriculture, forestry and fishing sector", where produced value added is lower. It is also one of the reasons why the differences in GDP and hence in economic development between Riga and other regions are so high.

Table 1. Regional economic distribution of the Latvian population in 2010 in %

Region	Population	Economically active population	Employed popuplation	Employment concentration by economic activity	
				LQ* max	LQ*min
Riga Region	48.8	69.4	54.7	1.42 in (H, J) sector	0.08 in (A) sector
Vidzeme region	10.4	60.8	52.0	1.99 in (A) sector	0.56 in (H, J) sector
Kurzeme region	13.3	63.4	53.8	1.60 in (A) sector	0.74 in (H, J) sector
Zemgale region	12.4	64.6	50.7	1.74 in (A) sector	0.74 In (H, J) sector
Latgale region	15.1	60.9	49.7	1.46 in (A) sector	0.76 in (F) sectors

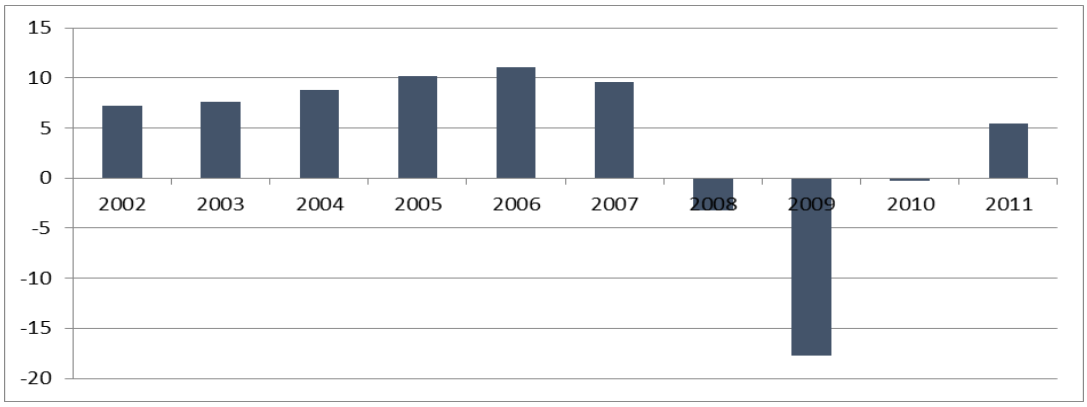
Source: Central Statistical Bureau of Latvia and own calculations by Central Statistical Bureau of Latvia

Note: (A) sector: Agriculture, forestry and fishing; (H, J) sector: Transportation, storage, information and communication; (F) sector: Construction

From the analysis of the economic structure of Latvia in Figure 1 and Table 1, one can conclude that the similarities across these rural areas make a comparison of the impacts of microloans appropriate across these regions.

3.2. The effects of the severe economic crisis in 2009-2010.

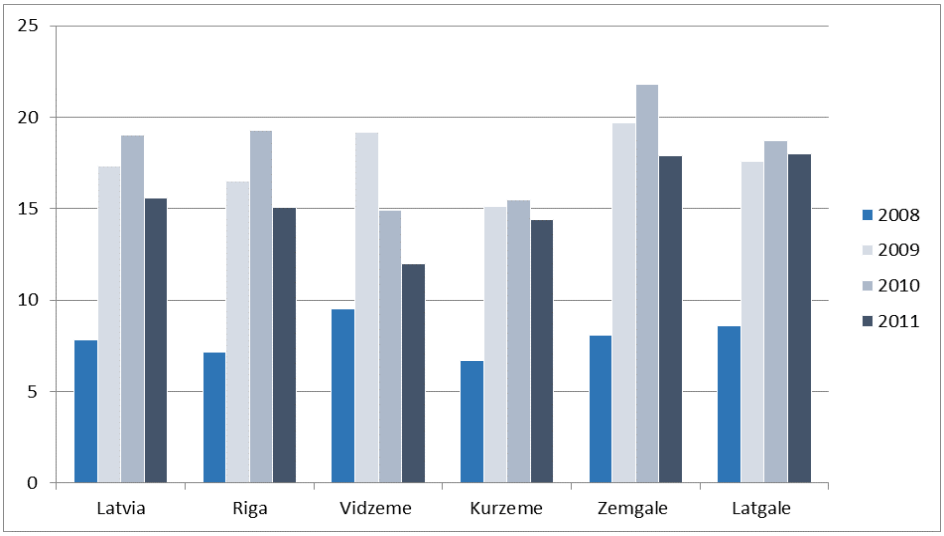
Latvia had to bear the consequences of a large economic crisis during the implementation period of the microloan programme of the Hipoteku Banka. After a long period of high growth rates in the 2000s, the economy became overheated and showed the first signs of weakness towards the end of 2007. Latvia was therefore especially vulnerable when the financial crisis occurred in 2008. As a consequence, a severe economic crisis hit the Latvian economy in 2008 and 2009 (*see* Figure 2), which was associated with fears that Latvia would eventually have to abandon its fixed exchange rate vis-à-vis the euro. Latvia had to obtain financial support from the IMF and the EU, and the Latvian government implemented high spending cuts in order to reduce the budget deficit to sustainable levels. Eventually, a stabilization of the economy and the government budget was achieved during 2010, and the fixed exchange rate vis-à-vis the euro was also able to be maintained. The economy stagnated in 2010 and grew again in 2011.



Source: Central Statistical Bureau of Latvia

Figure 2. Growth Rate of Real GDP, % change with respect to previous year

At the same time as the economy started to contract, unemployment rose sharply from around 7% to nearly 20% in 2010 (see Figure 3). Regarding unemployment, it is interesting to have a closer look at the regional disparities shown in Figure 3.



Source: Central Statistical Bureau of Latvia

Figure 3. Regional unemployment rates in Latvia, in %

One can see that in most regions, unemployment still rose in 2010, but fell in Vidzeme and stayed roughly constant in Kurzeme. As a result, these two regions showed the lowest unemployment rates of all Latvian regions in 2010. In 2011, unemployment fell considerably in Latvia with Riga, Vidzeme and Zemgale showing the largest decrease. We are going to refer to these regional disparities in unemployment rates again when discussing the impacts of the microloan programme in section 4.

Table 2. Evolution of employment across sectors of activity from 2009 – 2011, changes in %

Sector of economic activity	Employment Increase
Agriculture	12.8
Manufacturing	-18.4
Whole sale and Retail Trade	-7.1
Transportation	-12.6
Accommodation and Food Services	-6.5

Sector of economic activity	Employment Increase
Information and Communication	-11.2
Real Estate Operations	-2.3
Scientific and Technical Activities	18.5
Arts and Recreation	-17.5

Source: Central Statistical Bureau of Latvia

Table 2 provides an overview of employment in those sectors of activity which are at the centre of our interest in this paper. One can see that manufacturing, transportation, as well as arts and recreation are among those sectors that show the largest decrease in employment during this period of overall economic contraction. Two sectors, namely agriculture and scientific and technical activities, have seen an increase in employment. This certainly reflects the fact that unemployed people moved to these sectors because they chose self-employment making.

3.3. The sectoral and regional structure of the Latvian economy

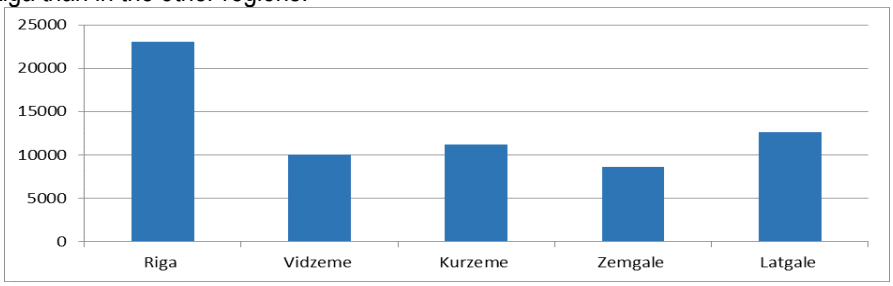
Table 3 shows the sectoral and regional structure of the Latvian economy. We focus on those economic activities where most of the firms in the microloan programme are active. In particular, the differences across the Latvian regions are interesting and will be of importance when analyzing the impacts of the microloan programme. The weight of each sector of economic activity with respect to total output is shown.

Table 3. Number of firms according to economic activity in % of total in 2009

	Latvia	Riga	Vidzeme	Kurzeme	Zemgale	Latgale
Agriculture	3.8	1.6	9.7	7.0	12.3	3.8
Manufacturing	10.8	8.9	16.4	14.8	15.4	12.0
Wholesale and Retail Trade	15.3	17.1	12.5	10.6	13.0	11.8
Transportation	11.1	12.4	4.1	14.5	4.6	7.9
Accommodation and Food Services	1.6	1.7	1.4	1.3	1.0	1.3
Information and Communication	4.3	5.9	1.1	1.4	1.1	1.8
Real Estate Operations	9.3	9.0	9.8	10.0	9.7	9.7
Scientific and Technical Activities	4.8	6.3	1.7	2.4	1.6	1.4
Arts and Recreation	1.7	1.7	1.5	1.8	1.5	1.8

Source: Central Statistical Bureau of Latvia

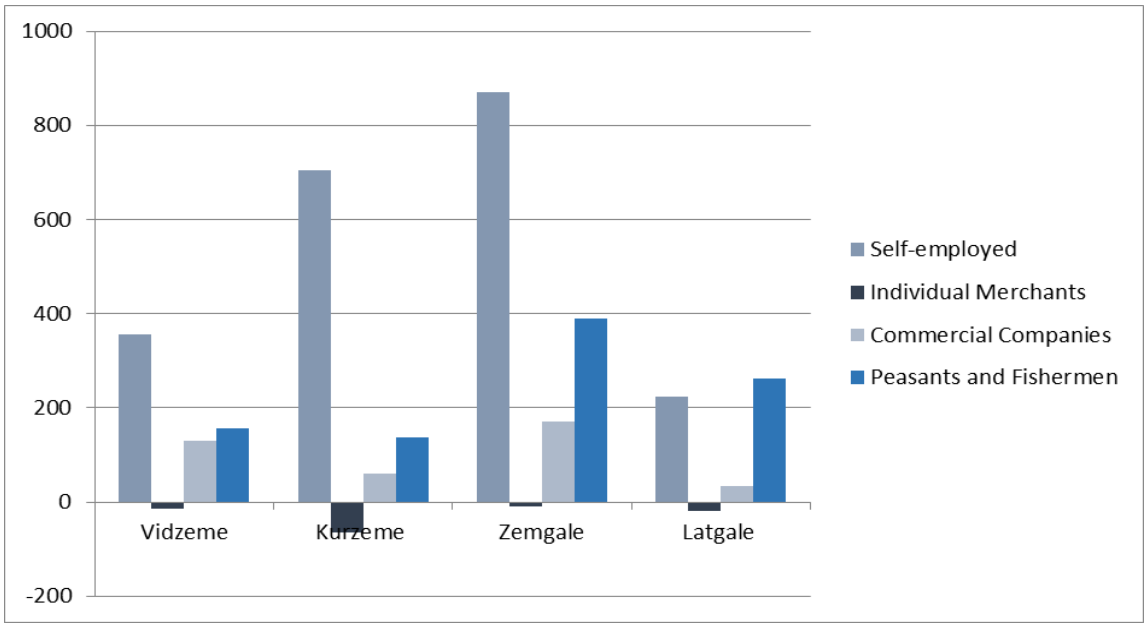
One can again see the differences between Riga and the rest of the country. In particular, Riga depends relatively less on agriculture and manufacturing than the rest of the country, while the services sector is more developed in Riga than in the other regions.



Source: Central Statistical Bureau of Latvia

Figure 4. Number of Small Enterprises across regions in 2009

In Figure 4, we now turn to the regional distribution of small enterprises across Latvia. Since the microloan programme is meant for small businesses, studying the regional distribution of these enterprises across Latvia is interesting for the interpretation of the results in section 4. As for the other economic indicators, one can see that the region of Riga has many more small businesses than other regions in the country. Across the other regions, the number of small businesses is relatively similar. However, one can nevertheless detect some differences showing that Latgale has more small firms than the other rural regions, while Zemgale lagged behind the other regions in 2009.



Source: Central Statistical Bureau of Latvia

Figure 5. Net increase in the number of enterprises across Latvian Regions in 2010

In Figure 5, the net increase of enterprises across Latvian regions is depicted for 2010. It contains a number of interesting pieces of information that will become relevant in section 5. The most eye-catching feature is that Zemgale saw a considerable increase in the number of firms, especially regarding self-employed people. The situation of the economy in Zemgale, which is characterized by relatively few firms (compare with Figure 4) and the highest unemployment rate in Latvia (compare with Figure 3) seems to have encouraged many people to choose self-employment as a way to escape unemployment and poverty. In contrast, the region of Latgale, which has a relatively high number of small firms (compare with Figure 4), only registered a relatively modest increase in the number of firms in 2010.

3.4. Access to finance

In this section, we have a closer look at the distribution and evolution of loans in Latvia. The following Table 4 shows results from a survey conducted by the *Central Statistical Bureau of Latvia* questioning enterprises about their problems.

Table 4. Percentage of firms in the respective category mentioning access to finance as a main problem. Results for 2011

Size of the Enterprise	%
Large Enterprises	11.30
Medium Enterprises	14.34
Small Enterprises	21.51

Source: Central Statistical Bureau of Latvia

Access to finance was found to be one of the main problems of the firms in the survey. Interestingly, small enterprises mentioned access to loans more often than larger enterprises. This highlights the potential benefits of microloans granted to small enterprises.

Table 5. Amount of loans by sector in 2008, in % of total

Sector	%
Agriculture	4.3
Manufacturing	14.0
Wholesale and Retail Trade	12.5
Transportation	4.9
Accommodation and Food Services	2.4
Information and Communication	0.2
Real Estate Operations	30.9
Arts and Entertainment	0.3
Other	30.5

Source: Central Statistical Bureau of Latvia

Table 5 shows the structure of loans across those economic activities which are at the center of our analysis.

Table 6. Change of amount of loans by sector, in %

Sector	2009	2010	2011
TOTAL	***-1.6***	***-10.3***	***-9.3***
Agriculture	-3.0	-8.6	-0.1
Manufacturing	-1.3	-13.3	-7.4
Wholesale and Retail Trade	-4.4	-15.4	-10.6
Transportation	10.2	1.1	-6.9
Information and Communication	47.6	18.8	-25.3
Accommodation and Food Services	6.1	-6.3	-11.8
Real Estate Operations	3.2	-6.2	-8.6
Arts and Recreation	17.3	-8.4	-5.5
Other	-8.9	-15.8	-11.9

Source: Central Statistical Bureau of Latvia

As a consequence of the economic crisis, the credit supply was strongly reduced as can be seen from Table 6, which shows the evolution of loans for those economic sectors that are at the center of our analysis. One can see that after a slight decrease in 2009, there was a considerable contraction of loans supplied to the economy in the years 2010 and 2011. Considering that the amount of loans had often grown by double digit rates in the years before, the decrease in the loan supply during the economic crisis becomes even more dramatic. In 2010, the sectors hardest hit by the credit crunch were the manufacturing and the retail trade sectors. Also agriculture, and arts and recreation saw a considerable decrease in credit supply. In 2011, the situation improved for agriculture, manufacturing, retail trade as well as for arts and recreation. For the other sectors, however, the situation further deteriorated.

This section gives an overview of the data used and presents the results of the research conducted on the basis of the questions raised in the introduction, namely the regional distribution of the loans and the impact on employment.

3.5. Description of the data

The microloan programme of the Hipoteku Banka studied in this paper lasted from 2009 to 2011 and the dataset comprises 391 supported businesses. Data on initial and final employment in each enterprise, the location of the business and its sector of economic activity are available.

Table 7. Number of firms according to economic activity, in % of total

	Firms in the Microloan Programme*	Firms in the Whole Economy (2009)
Agriculture	10.4	3.8
Manufacturing	25.9	10.8
Wholesale and Retail Trade	8.0	15.3
Transportation	5.2	11.0
Accommodation and Food Service	10.4	1.6
Information and Communication	4.7	4.4
Real Estate Operations	9.9	9.3
Scientific and Technical Activities	4.7	4.8
Arts and Entertainment	11.3	1.7
Other	9.4	37.5

*Note: *The total of firms in the microloan programme consists of the total of supported firms whose sector of activity is known.*

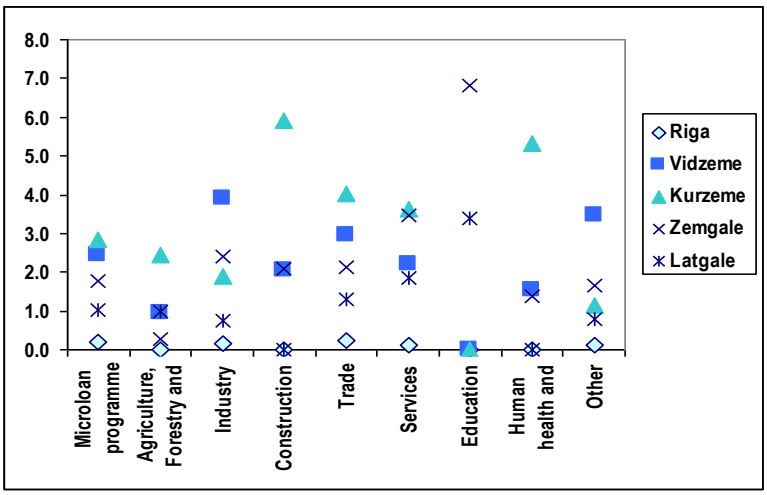
Source*: Own calculations based on data from Hipoteku Banka and the Central Statistical Bureau of Latvia*

Table 7 shows the distribution of the supported enterprises across sectors. For comparison, we also show their corresponding share in the Latvian economy. Only those sectors which show a high share of microloans are depicted. One can see that the enterprises supplied with microloans are active within those sectors that are typical for small enterprises or start-ups. The activities also reflect the focus of the Hipoteku Banka, which is mainly active in rural areas. Hence, a relatively high share of the supported businesses can be found in the agricultural sector. Also, small businesses in manufacturing, the accommodation and food sector, and in arts and entertainment obtain take a higher share in the microloan programme than in the Latvian economy as a whole.

Does microloan programme stimulate development of sectors, which could be named like sectors of region's specialization or promote development in other sectors?

First of all the regional specialization of the microloan programme should be noted. Taking into account calculated LQ values we can indicate that all regions except Riga and Latgale specialize on this microloan programme. This means that the microloan programme is an important instrument to support the realizing of economic potential of above-mentioned regions. Moreover, the LQ values show that the number of supported firms within the regions is sufficient so that certain sectors could be attributable to regional specialization.

Riga region is weakly involved in the Hipoteku Bank microloan programme, while other regions show positive trends. In general, it can be concluded that service sector, particularly trade, is dominated and in most cases forms regional specialization by the microloan programme. However, high LQ values in Vidzeme, Kurzeme and Zemgale not only in Trade sector, but also in the Industry sector as a positive fact should be mentioned. However, if the support of microloan programme provides increasing in employment or maintaining employment in the long term, the kind of supported sectors are of little importance.

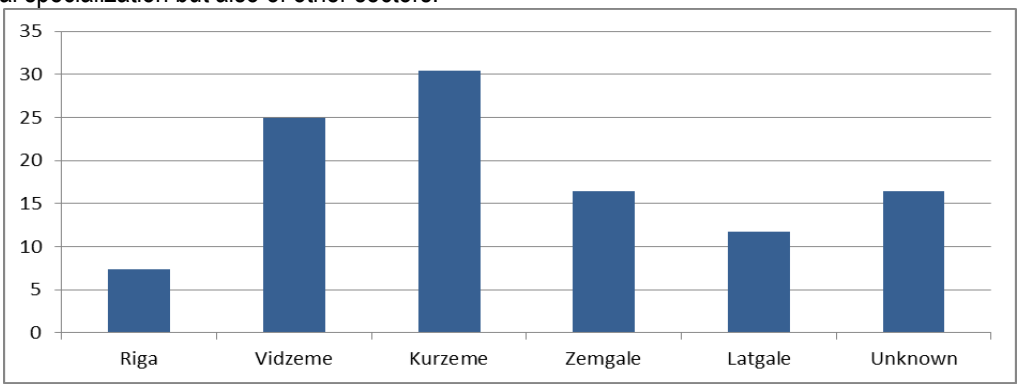


Source: Own Calculations based on Data from Hipoteku Banka and the Central Statistical Bureau of Latvia

Figure 6. Regional and sectoral specialization by microloan programme in Latvian regions, LQ values

The calculations also indicate that the agricultural sector is the one that is the most involved in the microloan programme in Kurzeme, while in other regions the numbers are lower. We pay attention to this, because according to other calculations (see Table 1) agriculture can be seen as sector of regional specialization in all regions (except Riga).

In general, it can be concluded that the microloan programme promotes development of not only sectors of regional specialization but also of other sectors.



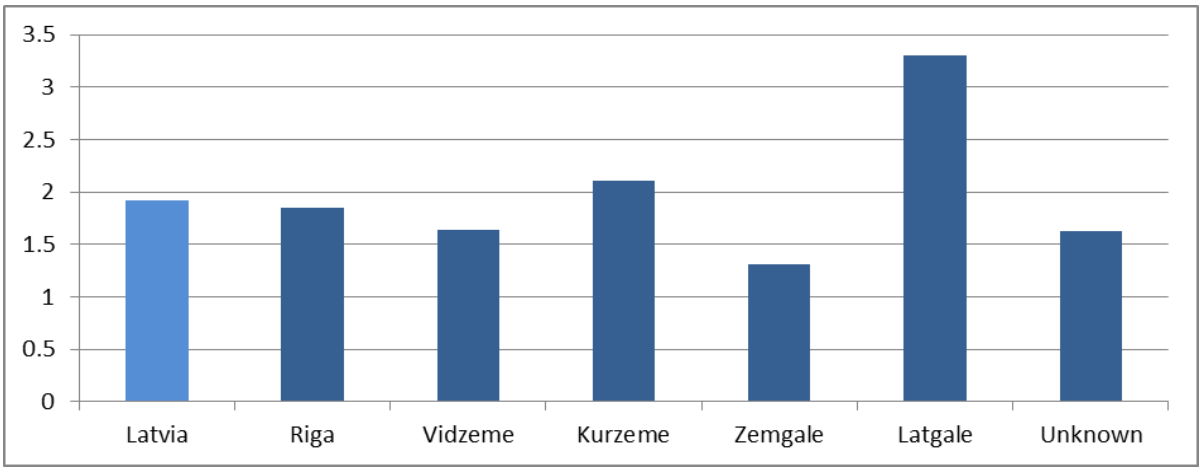
Source: Own Calculations based on data provided by Hipoteku Banka

Figure 7. Regional Distribution of Supported Projects, in % of total

Figure 7 displays the regional distribution of supported businesses. As discussed above, the Hipoteku Banka focuses its activities on rural and economically less developed regions. The low number of 7% for Riga, where microloans are not promoted as much as in other regions, can therefore be easily explained. In addition, enterprises in the region of Riga only became eligible for loans in December 2010. Small businesses in Vidzeme and Kurzeme attracted considerably more loans than the other regions. The lower share for Latgale may be explained by a relatively low share of the agricultural and manufacturing sectors in this region (see Table 3), which are two sectors heavily supported by the Hipoteku Banka. For Zemgale, there are no such differences in the economic structure. The relatively low share can possibly be explained by the relatively low number of small enterprises in this region (see Figure 4).

3.5. The effects on employment

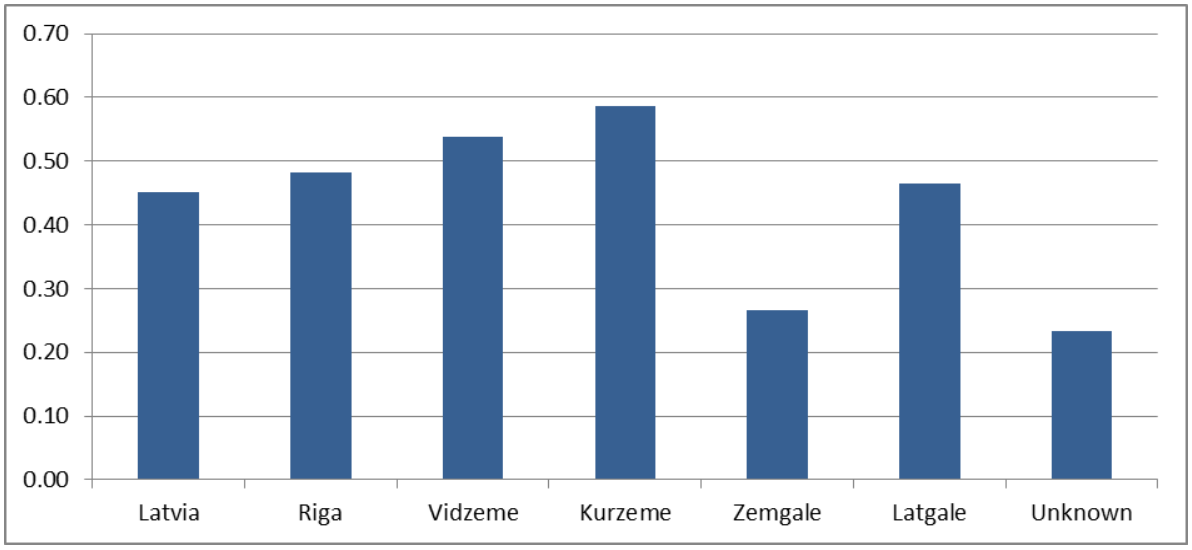
Before looking at the effects on employment, we depict in Figure 8 the average initial employment in the supported enterprises.



Source: Own calculations based on data provided by Hipoteku Banka

Figure 8. Average initial employment in supported enterprises

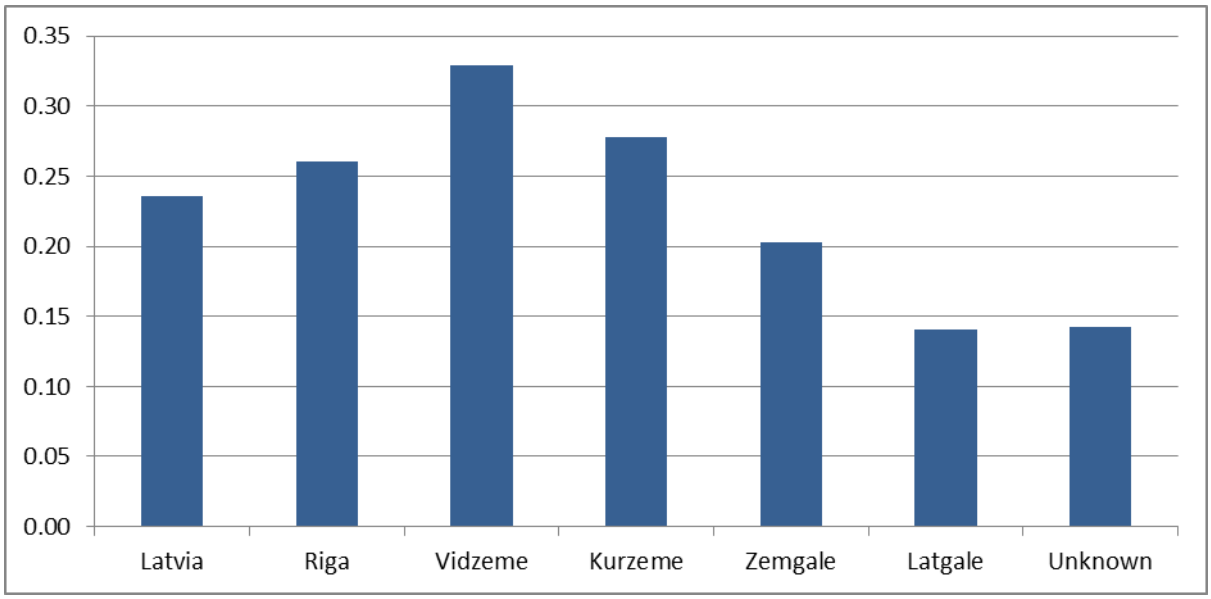
Although Hipoteku Banka in general grants loans to entrepreneurs with up to 9 employees, it mainly supports smaller enterprises or start-ups, which is in accordance with its goals. The average number of employees in the supported enterprises is slightly less than 2. These generally low figures imply that the loans indeed go mainly to small start-ups or unemployed people who want to become self-employed. Average initial employment in the enterprises lies between 1.3 and 2.1 in all regions except Latgale, where it is above 3. The high figure for Latgale may reflect the fact that there are less start-ups in this region as was shown in the last section (compare with Figure 5). Also, the agricultural sector, where people are often self-employed, is less important in Latgale. For Zemgale, the low figure probably reflects the fact that high unemployment in this region (compare with Figures 3 and 5) may have led to a high number of start-ups and self-employment. Besides, one can also see that those firms whose origin is unknown show no significant differences with respect to other regions.



Source: Own Calculations based on data provided by Hipoteku Banka

Figure 9. Employment increase per supported project

In Figure 9, one can see that employment in the supported enterprises increased during the period of the microloan programme. This is remarkable, because unemployment in the whole economy increased in 2009 and 2010 and decreased only slightly in 2011. Enterprises in the regions of Riga, Vidzeme and Kurzeme seem to have outperformed the other regions. Since the region of Zemgale had the lowest average initial employment level, it also saw the lowest increase in employment per project.



Source: Own calculations based on data provided by Hipoteku Banka

Figure 10. Employment increase as a ration of initial employment

For the employment increase as a ratio of initial employment, one can see again in Figure 10 that on average, employment increased by a remarkable 23%. The three regions Riga, Vidzeme and Kurzeme are above average with increases between 25-33%, while Zemgale and Latgale lag behind showing numbers of approximately 20% and 14%, respectively.

3.6. The employment effects across sectors of economic activity.

In this section, we briefly describe the evolution of average employment across different sectors of activity. As mentioned above, the number of observations for most of the sectors is low, which results in high standard deviations of these average changes. The numbers nevertheless show interesting tendencies and differences across sectors (see Table 8).

Table 8. Jobs created per sector of economic activity, in % of initial employment

Sector of Economic Activity	Employment Increase
Agriculture	45.0
Manufacturing	19.2
Wholesale and retail Trade	14.5
Transportation	-19.9
Accommodation and Food Services	58.6
Information and Communication	16.7
Real Estate Operations	0.0
Scientific and technical activities	5.3
Arts and Recreation	60.2
Other and Unknown	15.1

Source: Own calculations based on data provided by Hipoteku Banka

The highest increase can be found in agriculture, accommodation and food services, and also in arts and recreation. In addition, manufacturing, wholesale and retail trade, and also the information and communication sector show considerable increases in employment. The employment increases are therefore the highest in those sectors where the Hipoteku Banka is mainly active (compare with Table 7).

Conclusion

In this paper, we studied the economic impacts of microloans using a case study from Latvia. We used a dataset provided by the Latvian development bank *Hipoteku Banka* and compared the results with economic indicators of Latvia and its regions. We find that the firms that were granted a loan from *Hipoteku Banka* on average considerably increased their employment during the loan period. While one cannot clearly identify the specific effect of the microloan programme on this employment increase, the rise in average employment is nevertheless a clear sign that Hipoteku Banka supported serious micro-enterprises and on average helped the enterprises through its loans to succeed. The regional spread of the loans has been rather even across the rural regions of the country and there have not been considerable differences in the performance of the supported firms across regions. All these things considered, one can conclude that the microloan programme made a successful contribution to the economic development of rural regions in Latvia. However, this study did not analyze the effects of the microloan programme on future access of the microfirms to traditional sources of finance. By providing a credit history to the supported businesses, the microloan programme can be expected to have a positive impact on future access to finance, which an important issue is left to future research.

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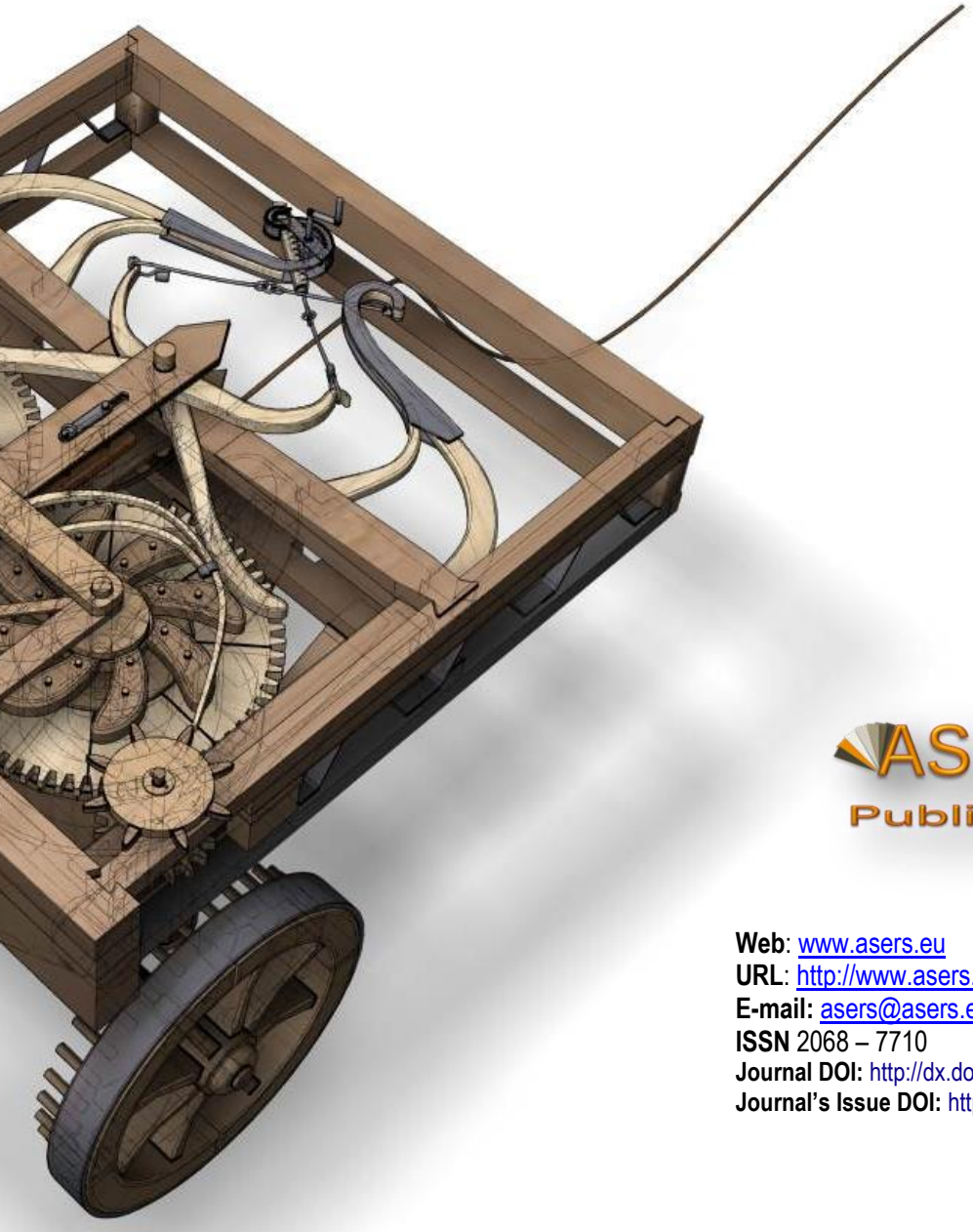

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