DETERMINANTS OF LABOUR PRODUCTIVITY IN THE REPUBLIC OF NORTH MACEDONIA WITH AN EMPHASIS ON THE ICT INDUSTRY

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Abstract

Labour productivity as a single factor measure represents the total volume of output produced per unit of labour during a given time reference period. Labour productivity affects various stakeholders in the society such as workers, companies and the government. Hence, determining the factors that affect the labour productivity represent a challenging task. The aim of this paper is to identify the industries that are drivers of the labour productivity growth in the Republic of North Macedonia and to shed light on its main determining factors. As potential factors that affect the labour productivity we consider: the consumption of fixed capital, the average net wage, workforce characteristics, jobs' characteristics and firms characteristics at industry level. The empirical findings show that industries with higher capital intensity and higher average net wage experience the highest labour productivity. In addition, temporary work arrangements, more experienced workforce and higher shares of private companies in a given industry are associated with better performance in terms of labour productivity. In addition, the emphasis is given to the analysis of labour productivity in the ICT industry as one of the leading industries in the Republic of North Macedonia. Finally, the analysis is used as a basis for defining appropriate policy measures for increasing the labour productivity by using the potentials of the ICT that would lead to greater competitiveness and economic growth.

Keywords: Labour productivity, wages, employment, ICT industry.

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1. Introduction

The economic growth in a given country can be attributed either to increased employment or to more effective work by those who are employed. The latter effect can be described by the indicators on labour productivity. Labour productivity is an important economic indicator that is closely linked to the economic growth, competitiveness and living standard within an economy. Higher labour productivity means to produce more goods and services with the same amount of resources or to produce the same level of goods and services with fewer resources.

Labour productivity affects various stakeholders such as workers, companies and the government. For workers increased productivity can translate to higher wages and increased living standard, while in the long term would lead to job creation. For businesses, increased productivity brings higher profit, greater competitiveness and opportunity for more investment. For the government, increased productivity results in higher tax revenues and better provision of public good and services.

At an industry level, labour productivity growth is important to allow the industry to compete with other sectors of the economy for resources and maintain international competitiveness. The productivity of labour is particularly important in developing countries where there still exists a large room for improvements in a number of industries. Hence, determining the factors that affect the labour productivity and productivity growth on an industry level represent a challenging task for the academics and policy makers.

The understanding of the driving forces behind the labour productivity is important for formulating policies to support economic growth. Application of an effective economic policy amongst other things, involves increasing the productivity, which can be achieved through a variation of as many productivity determinants as it is feasible and economically beneficial. It is important to note that some sectors of the economy have traditionally had low productivity growth but are important to aggregate productivity growth. Consequently, government policies, which only focus on sectors exhibiting productivity growth, could be detrimental for the productivity growth as a whole.

Generally, the productivity improvements are not spread evenly across the economy. For example, computer hardware productivity has been rising dramatically as the price of microprocessor chips has plunged relative to their ability to perform more instructions per second. In addition, the information and communication technology (ICT) have raised the productivity or output of the people/companies using those technologies. It is a common view that the ICT industry plays a critical role in increasing the productivity and busting the economic development of a given country. Thus, increasing the ICT use by the business entities in general, would increase the labour productivity in other industries as well.

The problems of sub-optimal labour market outcomes in post-transition countries such as the low-productivity employment deserve further scientific attention due to their enormous social implications. Having in mind the above considerations, the aim of this paper is to identify the industries that are drivers of the labour productivity growth in the Republic of North Macedonia and to shed light on its main determining factors. In addition, the emphasis will be given to the analysis of labour productivity in the ICT industry as one of the leading industries of the country's economic performance. Finally, the analysis will be used as a basis for defining appropriate policy measures for increasing the labour productivity that would potentially lead to greater competitiveness and economic growth.

2. Theoretical background

Productivity is generally defined as a ratio of volume measure of output to a volume measure of input use. Alternatively, productivity is expressed as quantity of produced goods (output) divided by the units of production factors used (input). The productivity measures can be classified as single factor or multifactor productivity measures. Labour productivity as a single factor measure represents the total volume of output produced per unit of labour during a given time reference period. It is expressed as output per worker or output per hour worked. Labour productivity only partially reflects the productivity of labour in terms of the personal capacities of workers or the intensity of their effort. The ratio between output and labour input depends to a large degree on the presence of other inputs.

According to the OECD (2001), there are various productivity concepts of which the following two concern the labour productivity: Labour productivity based on gross output and Labour productivity based on value added.

The labour productivity based on gross output shows the time profile of how productively labour is used to generate gross output. When measured as gross output per unit of labour input, labour productivity growth also depends on how the ratio of intermediate inputs to labour change. Gross output based labour productivity traces the labour requirements per unit of physical output. It reflects the change in the input coefficient of labour by industry and can help in the analysis of labour requirement by industry. The advantage of this concept can be viewed in the ease of measurement and readability. In particular, the gross output measure requires only prices indices on gross output, not on intermediate inputs as is the case for the value added based measure.

The labour productivity based on value added shows the time profile of how productively labour is used to generate value added. In comparison with the previous concept, the growth rate of value added labour productivity is less dependent on any change in the ratio between intermediate inputs and labour. The purpose of using this concept is to analyse the micro-macro links such as the industry contribution to economy wide labour productivity and economic growth. From a policy perspective, value added based labour productivity is important as a reference statistic in wage bargaining.

As potential groups of factors affecting the labour productivity are considered the following: (1) the quality of the labour force, (2) the amount of capital goods employed and, (3) the efficiency with which labour, capital and other inputs are combined in the production of final goods and services (McConnell et al., 2003). Namely, improvements in output per unit of labour may be due to increased quality and efficiency of the human factor as well as other factors such as capital intensity, institutions and other conditioning variables.

The quality of labour depends on its education and training, its health and vitality, and its age-gender composition. With this regard, we assume that better educated and better trained workforce at industry level can produce more output than a less educated and/or inadequately trained one. The increase in labour quality in turn generates self-reinforcement effects through the rise of real wages. Namely, enhanced earnings allow workers to improve their health and education, which leads to further improvements in labour quality and productivity. Alternatively, according to the efficiency wage theory, the wage rate above the market clearing level will also exert an increase of labour productivity.

Regarding the quantity of physical capital, we assume that the productivity in any given industry will depend on the amount of capital equipment used. For instance, IT equipment facilitates the expansion of business activities and eases the information transactions between employees and managers which potentially leads to increase of labour productivity.

Increased efficiency encompasses: technological progress, greater specialisation as the result of scale economy, the reallocation of labour from less to more productive uses and, changes in institutional, cultural and environmental setting and its public policies.

Closely related to the productivity growth in a given market economy is the concept of 'Creative destruction'. This term is attributed to the famous economist Joseph Schumpeter who defined creative destruction as continuous process by which emerging technologies push out the old, thus increasing the productivity. As a consequence, we are witnessing a constantly changing structure of the economy. Old industries and firms which are no longer profitable close down enabling the resources to move into more productive processes. Creative destruction means that the company closures and job losses are good for the long-term well-being of the economy and can be seen from both a negative and positive perspective. For instance, the recent trend of developing IT technologies has begun to alter the manner in which businesses creates economic value and contributes to speeding up the process of creative destruction.

The process of creative destruction has been particularly pronounced during the transition process (De Loecker and Konings, 2003). According to Blanchard (1997) in the context of labour market performance, the process of transition has been mainly led by two driving forces: ownership restructuring and sectoral reallocation. These processes respectively assume a large-scale transformation of state owned firms into privatised ones and, a reallocation of a substantial part of the labour force from the manufacturing and agricultural sectors towards the expanding service sector. The later phase of transition, when the major restructuring process of the state sector finished, is represented by a so-called 'balanced path'. The main driving force of labour force adjustment in this phase is the private sector where the major entrants into new employment come from the pool of the unemployed.

3. Data

The data used for the empirical analysis is taken from the officially published reports of the State Statistical Office of the Republic of North Macedonia for the period 2011-2016. More precisely the labour productivity by industry is assessed according to the production approach in calculation of the Gross Domestic Product (GDP). Data sources used for GDP calculations are the annual financial reports from the Central Register, data from the annual statistical surveys, data from the Ministry of Finance, the Public Revenue Office and other sources. Data on the sources of value added and the cost structure of the GDP by production approach at current prices are presented by sectors according to the NACE[2] Rev.2 classification. The complete list of the main economic activities according to NACE Rev.2 classification is presented in Appendix 1.

Gross Domestic Product (GDP) at market prices is the final result of the production activity of the resident producer units and it is the sum of gross value added of the various institutional sectors or the various activities at basic prices plus value added, import duties less subsidies on products. Gross value added at basic prices is the basic category of GDP. It represents the balance between gross output and intermediate consumption. On the other hand, gross output is considered the value of goods and services produced in the course of one year, regardless of whether or not the whole quantity is sold or partly added to stocks.

Total employment in accordance with the European system of accounts methodology covers all persons either employed or self-employed engaged in some productive activity that falls within the production boundary of the system. Employees are defined as all persons who, by agreement, work for another resident institutional unit and receive remuneration. In

[2] NACE is abbreviated from Statistical classification of economic activities in the European Community.

accordance with the National Account concepts, the total number of employees covers the number of employees from the annual financial reports, and the adjusted number of non-registered employees by using Labour Force Survey data.

Self-employed are defined as persons who are sole owners or joint owners in unincorporated enterprises. The compensation of employees for the self-employed represents mixed income. Based on this definition, the category of self-employed includes people who run their own business, persons who pay annual lump-sum income tax to the Public Revenue Office, unpaid family workers, and persons who do not have a formally registered business and are estimated based on the Labour Force Survey.

Data on estimated employees and self-employed are obtained by comparison with Labour Force Survey data according to the domestic concept i.e. including non-residents working in North Macedonia and excluding residents who work abroad. The estimates are made by using the method of balancing the number of employees from different sources that are the basis for estimating the non-observed economy. Employment data are measured in number of persons in employment.

4. Empirical analysis

The first part of the empirical analysis consists of presenting main trends in the labour productivity in the Republic of North Macedonia at industry level. In our empirical analysis we do not include Real estate activities because they encompass imputed rents of owner-occupied dwellings. In addition, Activities of households as employers and Activities of extra-territorial organisations and bodies are not taken into account due to the fact they are outside the SNA[3] production boundary. The labour productivity at industry level is assessed according to the production approach in calculation of the Gross Domestic Product (GDP) taken from the officially published reports by the national statistical offices. According to the OECD Manual on measuring productivity (2001), we separately consider two labour productivity concepts: Labour productivity based on gross output and Labour productivity based on value added.

The average labour productivity based on value added by industry in the Republic of North Macedonia for the period 2011-2016 is presented on Figure 1.

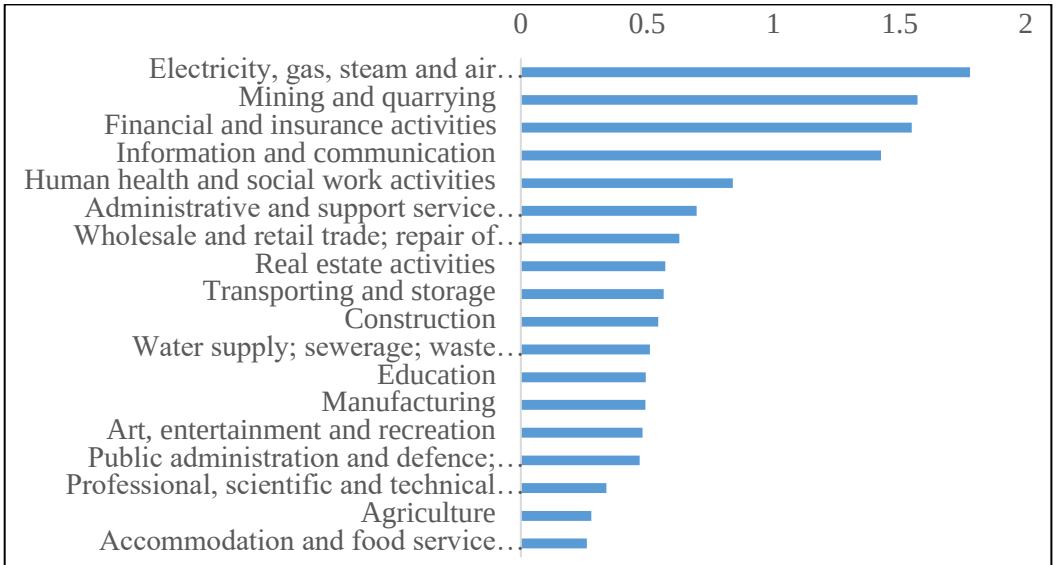

Figure 1. Average labour productivity in North Macedonia

[3] SNA stands for System of National Accounts.

In the second part of the empirical analysis we separately estimate alternative econometric models in order to identify statistically significant factors of labour productivity. Among the factors that can potentially influence the labour productivity we consider the following: Capital intensity; wage level; workforce characteristics, jobs' characteristics and firms' characteristics. As typical workforce characteristics we consider the education, age and gender composition at industry level. The jobs' characteristics depends on the type of employment arrangement (temporary/contract) and number of hours (part-time/full-time). Finally, firm's characteristics depends on the type of ownership and size of the companies.

Increased physical capital of a firm, generally lead to increased labour productivity. In our analysis we use the consumption of fixed capital during the accounting period as a component of GDP and it is defined as a decrease in the current value of producer's fixed assets due to the physical use, obsolescence and accidental damages. When calculating GDP, the depreciation value is calculated based on the data from the annual reports of legal entities. The amount of physical capital is divided by the number of employees in each industry in order to express it per employee. The relationship between the labour productivity and the consumption of fixed capital per employee is presented on Figure 2.

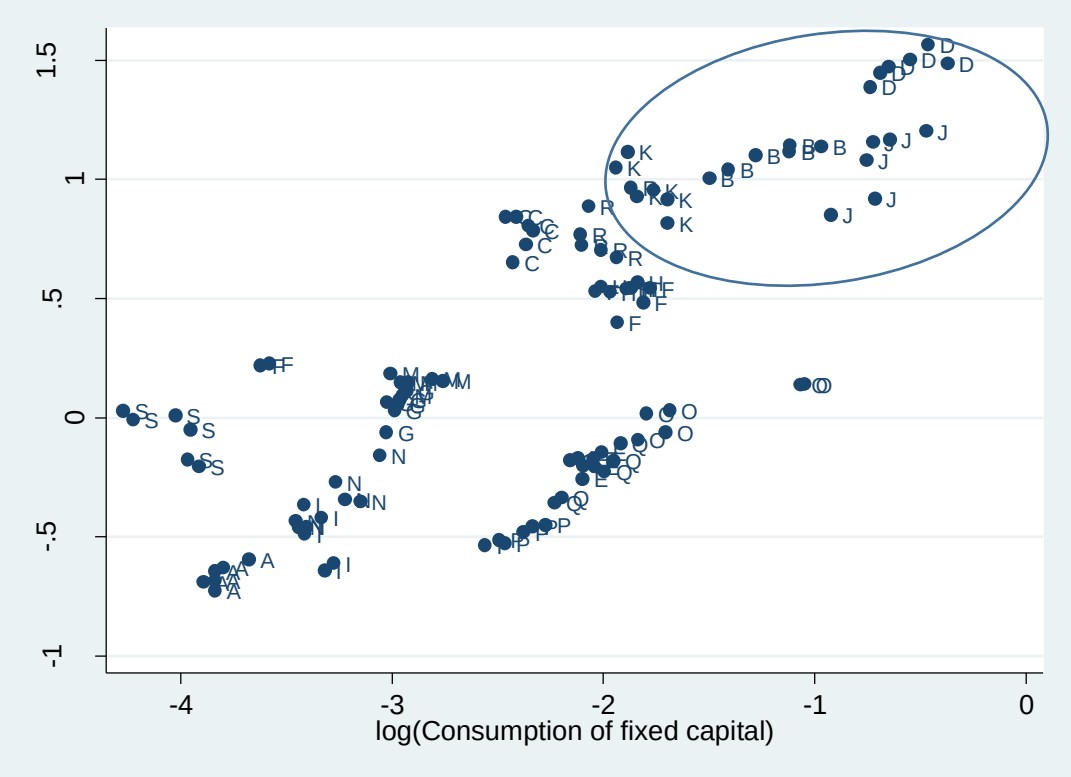

Figure 2. Relationship between labour productivity and consumption of fixed capital

The impact of the wage rate above the market clearing level according to the wage efficiency theory will increase labour productivity. There are various reasons for this phenomenon that can be generally explained by two models within the framework of the efficiency wage theory (Schlicht, 2016). For instance, the incentive-driven model states that as wage level increases, workers will be more motivated to keep their jobs and will therefore try to increase the level of their productivity. On the other hand, the gift exchange model is based on the assumption that high wages change the relationship between an employer and an employee in the way that the employee will be more attached to the employer and will try to increase his own productivity. The relationship between the labour productivity and the average net wage is presented on Figure 3.

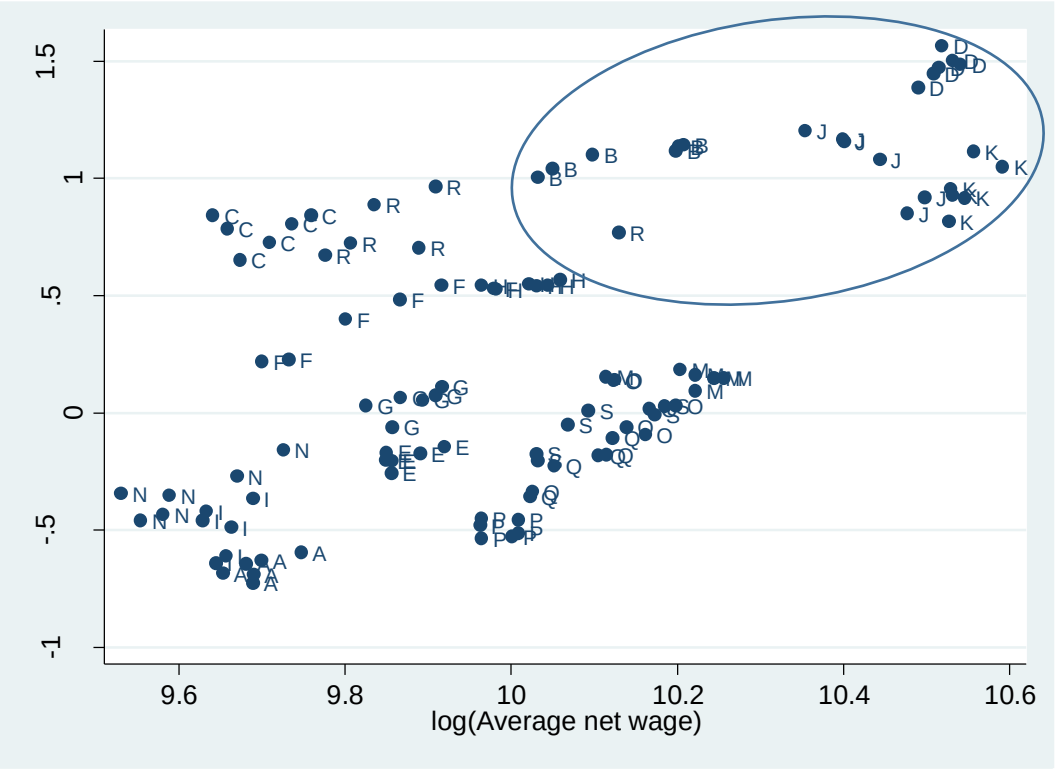

Figure 3. Relationship between labour productivity and average net wage

The effects of education, age and gender at industry level are estimated as percentage shares of workers with higher education, youth (younger than 29) and female respectively. In this way, we attempt to assess the impact of human capital on labour productivity which is widely recognised in the economic literature (Ehrenberg and Smith, 2009). According to the human capital theory, human capital contributes to the output just like other factors of production and also through technological change.

The work arrangement characteristics are assessed separately by the shares of workers with temporary and part-time contracts at industry level. As a part-time employee is considered an employed person that works fewer hours per week than a full-time employee, the latter being typically employed for 40 hours. The temporary employment is contractual employment arrangement between one employer and one employee characterised by a limited duration or a pre-specified event to end the contract. Temporary employment is sometimes called 'contractual', 'interim', 'casual' or 'freelance' and it has been recently related to jobs associated with the 'gig economy'.

Finally, ownership and size as the most important firms' characteristics are taken into consideration by separately estimating the shares of private and small firms at industry level. In this context, many economists believe that productivity and efficiency in the private sector is higher than in the public sector. Namely, employment of more skilled workers by private enterprises makes them superior in terms of labour productivity. Regarding the firm size, the theory supports the view that small and medium sized enterprises (SMEs) are less cost efficient than the larger one due to economies of scale, product differentiation, lack of R&D expenditures and lack of vertical integration.

In order to estimate the labour productivity model we use a panel data covering the industries according to the NACE rev.2 classification during the period 2011-2016. The model is expressed as follows:

$$lnLP_{it} = \alpha_0 + \alpha_1 lnK_{it} + \alpha_2 lnW_{it} + \alpha_3 Higher_{it} + \alpha_4 Young_{it} + \alpha_5 Female_{it} + \\ + \alpha_6 Temp_{it} + \alpha_7 Part_{it} + \alpha_8 Private_{it} + \alpha_9 Small_{it} + u_{it} \quad \ldots (1)$$

where,

$lnLP_{it}$ is the logarithm of average labour productivity expressed either as gross output or value added per employee in industry *i* and year *t*;

lnK_{it} is the logarithm of average capital intensity per employee in industry *i* and year *t*;

nW_{it} is the logarithm of average net wages in industry *i* and year *t*;

$Higher_{it}$ is the share of employed with higher education in industry *i* and year *t*;

$Young_{it}$ is the share of youth employed in industry *i* and year *t*;

$Female_{it}$ is the share of female employed in industry *i* and year *t*;

$Temp_{it}$ is the share of employed in temporary jobs in industry *i* and year *t*;

$Part_{it}$ is the share of employed in part-time jobs in industry *i* and year *t*;

$Private_{it}$ is the share of employed in private companies in industry *i* and year *t*;

$Small_{it}$ is the share of employed in small companies in industry *i* and year *t*;

The results of the estimated model of labour productivity based on gross output are presented in Table 1.

Table 1. Estimation results (Labour productivity based on gross output)

Variable	1	2	3	4
Constant	-3.514385**	-2.966279*	-2.50289	-2.715164
	(0.015)	(0.095)	(0.142)	(0.108)
lnK_{it}	.1491926***	.1584171***	.1598654***	.1526122***
	(0.000)	(0.000)	(0.000)	(0.000)
lnW_{it}	.4121958***	.3611058**	.3102328*	.3078693*
	(0.004)	(0.045)	(0.073)	(0.071)
$Higher_{it}$		.256007.149186	.1360976	
		(0.402)	(0.615)	(0.641)
$Young_{it}$		-.6941478**	-.865934***	-.9095157***
		(0.014)	(0.002)	(0.001)
$Female_{it}$		.0329658	.1385222	-.0061293
		(0.912)	(0.634)	(0.983)
$Temp_{it}$			.570326***	.5581857***
			(0.003)	(0.003)
$Part_{it}$			-.0497593	-.1014465
			(0.879)	(0.754)
$Private_{it}$				.3712828**
				(0.040)
$Small_{it}$				.0648657
				(0.704)
R^2 within	0.3202	0.3698	0.4362	0.4653
R^2 between	0.5987	0.4477	0.4795	0.6743
R^2 overall	0.5883	0.4446	0.4738	0.6581

*Note: p-values are in parentheses; */**/*** indicate significance at 10/5/1 percent level respectively.*

From Table 1 we can conclude that the estimated model is robust and provides results that are consistent with the theoretical assumptions. Namely, the capital intensity is the most important and statistically significant factor that determines the labour productivity. In addition, the average net wage positively affect the labour productivity. As expected, industries with higher shares of youth workforce have lower levels of labour productivity due to lower experience of younger workers. In contrast, higher shares of temporary jobs are associated with higher labour productivity assuming that temporary contracts are more characteristic for highly qualified professionals. Finally, according to the labour productivity based on gross output, higher share of private companies in a given industry is associated with higher labour productivity.

In addition, we estimate the model of labour productivity based on value added. The estimation results are presented in Table 2.

Table 2. Estimation results (Labour productivity based on value added)

Variable	1	2	3	4
Constant	-6.30454*** (0.000)	-4.248381** (0.039)	-3.521617* (0.061)	-3.665178* (0.054)
lnK_{it}	.2164551*** (0.000)	.2314028*** (0.000)	.2340926*** (0.000)	.2290128*** (0.000)
lnW_{it}	.6334906*** (0.000)	.4287921** (0.039)	.3487073* (0.067)	.3448459* (0.071)
$Higher_{it}$		.6454233* (0.069)	.4922129 (0.133)	.4892461 (0.138)
$Young_{it}$		-.6416342** (0.047)	-.8881359*** (0.004)	-.9109969*** (0.004)
$Female_{it}$		-.2097224 (0.544)	-.0596226 (0.852)	-.1243156 (0.708)
$Temp_{it}$			.8688714*** (0.000)	.8742803*** (0.000)
$Part_{it}$			.0340863 (0.924)	-.0001452 (1.000)
$Private_{it}$				.1866768 (0.353)
$Small_{it}$				.1012489 (0.597)
R^2 within	0.4366	0.4775	0.4362	0.5819
R^2 between	0.8319	0.7181	0.4795	0.7562
R^2 overall	0.8161	0.7097	0.4738	0.7449

*Note: p-values are in parentheses; */**/*** indicate significance at 10/5/1 percent level respectively.*

From Table 2 we can notice that the estimated coefficients are with approximately same magnitudes and signs as in the previously estimated model. In addition, the same variables except the variable *Private* appear as statistically significant, which confirms the robustness of the specified model.

5. The case of ICT industry

The ICT industry is one of the fastest growing sectors of the Macedonian economy, and it plays an important role in the economy as a provider of jobs and generator of exports. With an annual growth rate between 2.3 and 7.7% over the last several years, North Macedonia's

Information and Communication Technology (ICT) sector is a promising area for foreign companies. The ICT sector benefits from a skilled and cost effective workforce with excellent English language skills, solid telecommunications infrastructure and low corporate tax. North Macedonia's ICT market was valued at €352 million in 2017. Hardware is the largest segment (55 percent), followed by ICT services (30 percent) and software (15 percent)[4].

The growth of the ICT industry has been spurred by four major factors. First, on the demand side, there is a growing trend among foreign companies to outsource software related tasks and activities to lower-cost destinations thereby creating substantial market opportunities for software and IT services companies in North Macedonia. Second, on the supply side, North Macedonia has significant comparative advantages, such as lower labour costs and highly skilled human capital. Third, like in many other transition countries, the Macedonian Government recognizes the strategic importance of the software industry for the development and competitiveness of its national economy. Being a cross-cutting technology, promoting the software industry is a well-proven measure to increase productivity, efficiency and innovation as well as to facilitate industrial transformation towards a knowledge based economy. The fourth factor contributing to the importance of software exports for the development of the economy of North Macedonia is the country's limited domestic market. Thus, export becomes an issue of paramount importance for the development and growth of the software industry.

A number of international companies such as Seavus (Sweden), Netcetera (Switzerland), M Soft (France), 6PM (UK/Malta) are successfully developing software in North Macedonia for the export market and others are providing 24/7 telephone customer support for major multi-national IT companies. Many large ICT companies, such as Microsoft, Cisco, Oracle, Dell, Compaq, Hewlett Packard, IBM, Sun Microsystems, Apple, and Lotus, are present in North Macedonia via branch offices, distributors, dealers, resellers, solution providers, and business partners. This growth is spurred by large investments by the government and telecommunications companies in IT, continued spending in the financial sector, a decrease in the price of IT equipment, and a decrease in VAT for the equipment.

The labour productivity in the ICT industry compared to the aggregate labour productivity in the Republic of North Macedonia is presented on Figure 4.

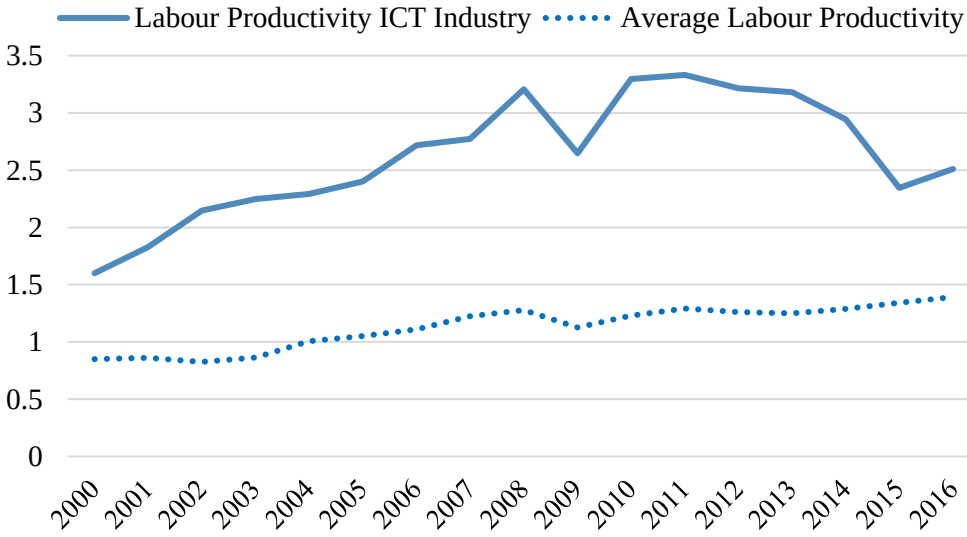

Figure 4. Labour Productivity in ICT Industry and aggregate labour productivity in the Republic of North Macedonia

[4] Source: http://www.investinmacedonia.com

From Figure 4 it is noticeable that the aggregate labour productivity during the period 2000-2016 marks a steady growing trend. However, the aggregate labour productivity in the Republic of North Macedonia still lags behind the developed OECD countries. On the other hand, although more volatile, the labour productivity in the ICT industry is considerably higher with signs for further improvement compared to the aggregate labour productivity. By taking into account the results from the previous empirical analysis, we can conclude that high capital intensity, high wage level and predominantly task-based contracts make ICT among the leading industries with respect to the labour productivity.

The role of ICT in the labour productivity of other sectors is assessed by the State statistical office of the Republic of North Macedonia. Namely, according to the obtained results in 2018, 94.4% of the enterprises used computer in their work, while 81.5% of the establishments with 10 or more employees had the fixed broadband connection to the Internet. From the total number of the enterprises, 53.9% had website/homepage, of which 89.6% provided on their website descriptions of goods or services, price lists, 51.7% had links or references to their social media profiles, and 21% provided online ordering, reservation or booking. Regarding the usage of e-commerce, 5.7% of the enterprises received e-sales orders via computer network, and 4.4% of the enterprises received orders for products or services via web-sales.

6. Conclusions and policy implications

The Republic of North Macedonia generally experiences low aggregate labour productivity compared to more economically developed countries. However, several industries make exception and are characterised with higher levels of labour productivity. Those are: Electricity, gas, steam and air conditioning supply; Mining and quarrying; Financial and insurance activities; and, Information and communication. In addition, the empirical findings show that the higher levels of capital intensity, higher wage levels, good job experience and task-based contracts characteristic for the ‘gig economy’ are the most relevant factors that influence the labour productivity at industry level.

Having in mind the results from the empirical analysis, the policies aiming to improve labour productivity in North Macedonia should be focused on: Investment in physical capital, quality of education and training; and technological progress. In this context, investment in high tech information and communication technology appears as valuable strategy for improving the workforce labour productivity. However, the general impression is that the North Macedonia government is preoccupied with other priorities and is paying little attention to developing of the ICT sector. Up to the present, the sector has received very little support from the government that has led many companies to call for more recognition from the authorities.

The on-going government measures toward fostering ICT growth address two major challenges: innovation and human capital. The first challenge is addressed by the innovative fund, tech parks and incubators and the second challenge is mainly addressed by projects which set out to retrain human resources. Furthermore, there is a need of preparing a national framework for coordination between state institutions, the education system and the private sector, where growth opportunities would be strategically evaluated and acted upon. According to a country report prepared by the European Commission, there is a need for developing a long-term digital strategy. Namely, there is a number of barriers for further development of the ICT sector that have to be removed. In addition the policy makers on the long-term need to

create much more awareness about the professional opportunities that the ICT sector provides for young professionals and their future[5].

Although direct measures for ICT have not yet been implemented by the institutions, still the industry is rapidly growing. One very important issue that can be improved is stronger cooperation between the government and the ICT sector for introducing new taxes and regulations. For example, measures to introduce tax relief on exported services would make Macedonian ICT companies more competitive in the global market. By recognising the importance of information and communication technology for the entire economy, can lead to a true digital evolution in the country and faster economic development.

However, still needs a lot to be done to bring the country to the same level as more developed countries in the emerging Europe region. Many large ICT companies, such as Microsoft, Cisco, Oracle, Dell, IBM and Apple, are present in the Republic of North Macedonia via branch offices, distributors, dealers, resellers, solution providers, and business partners. But with an unemployment rate of 17.8 per cent, finding the right talent can be a tough challenge. There is quite a lot of demand for such services on a global level, and the real opportunity for the ICT sector is to match the demand with skilled professionals. In this context, the policy makers need to encourage cooperation between companies and universities by supporting partnership projects for the re-qualification of workers with IT-related skill profiles.

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[5] Source: https://emerging-europe.com

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Appendix 1

NACE Rev.2 Statistical Classification of Economic Activities

A	Agriculture
B	Mining and quarrying
C	Manufacturing
D	Electricity, gas, steam and air conditioning supply
E	Water supply; sewerage; waste management and remediation activities
F	Construction
G	Wholesale and retail trade; repair of motor vehicles and motorcycles
H	Transporting and storage
I	Accommodation and food service activities
J	Information and communication
K	Financial and insurance activities
L	Real estate activities
M	Professional, scientific and technical activities
N	Administrative and support service activities
O	Public administration and defence; compulsory social security
P	Education
Q	Human health and social work activities
R	Art, entertainment and recreation
S	Other services activities
T	Activities of households as employers
U	Activities of extra-territorial organisations and bodies